

**Bond University**

## **DOCTORAL THESIS**

**The Elder Scrolls V: Skyrim and its audience as a world-building benchmark for Indigenous virtual cultural heritage.**

Majewski, Jakub

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*The Elder Scrolls V: Skyrim* and its Audience  
as a World-Building Benchmark  
for Indigenous Virtual Cultural Heritage

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Submitted in total fulfilment of the requirements of the degree of  
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## Abstract

The preservation of Indigenous Australian cultural heritage (CH) is a challenge acknowledged by communities, scholars, and policymakers. Research indicates video games are strong tools for heritage, but existing culture-oriented serious games are unsuccessful as cultural worlds. Commercial open-world role-playing games (RPGs) like *The Elder Scrolls V: Skyrim* (2011) immerse players in complex virtual worlds populated by fictional societies and cultures. The engagement of commercial game players in informal learning and production in the context of online passionate affinity spaces (PAS) indicates players become invested in the cultural content depicted in games. While commercial RPGs do not typically transmit real cultural heritage, culture-oriented serious games can be enhanced by importing features from commercial RPGs. This thesis poses the question: how can open-world RPGs like *Skyrim* contribute to the transmission of Aboriginal heritage?

To respond to this question, three studies were conducted. Immersive autoethnography was employed to investigate world-building tools, methods, and strategies employed in *Skyrim*. An online survey explored *Skyrim* player motivations and modus operandi in PAS engagement, as encyclopaedists who collate game lore on the Unofficial Elder Scrolls Pages, and as modders, who produce patches and modifications for *Skyrim*. Finally, qualitative interviews were conducted with 12 experts from heritage, virtual heritage, and video games to explore the requirements of Indigenous Australian CH. The three studies were synthesised to develop a set of guidelines and recommendations for the content and development procedures of RPGs for indigenous CH.

*Skyrim's* world-building was found to use a wide range of tools and practices possible to incorporate individually or together to enhance heritage-oriented serious games. The survey of *Skyrim's* PAS communities showed the game's world-building methods inspire players to learn and apply a range of knowledge and skills motivated by interest in the game world. Expert interviews identified focal points for game-based depiction of indigenous cultures, including a focus on values and relationships rather than individual cultural features. The importance of natural heritage and desirability to develop greater environmental dynamics in virtual worlds was noted.

The thesis concludes RPG virtual worlds can immerse players in a new culture within a unified environmental, social and cultural context, making them holistic frameworks appropriate for the depiction of indigenous culture.

**Keywords:** virtual heritage, cultural heritage, Aboriginal culture, indigenous culture, role-playing games, world-building, game fandom, passionate affinity spaces, participatory culture, The Elder Scrolls, Skyrim.

## Declaration

This thesis is submitted to Bond University in fulfilment of the requirements of the degree of Doctor of Philosophy.

This thesis represents my own original work towards this research degree and contains no material that has been previously submitted for a degree or diploma at this University or any other institution, except where due acknowledgement is made.

.....  
Jakub Majewski

## Ethics declaration

The research associated with this thesis received ethics approval from the Bond University Human Research Ethics Committee. Ethics application numbers: 0000015713 and 0000015949.

## Acknowledgements

It is a truism a thesis is not simply written by its author. Like any “individual” work, a thesis is ultimately the product of an entire support network. Nor is it limited to the four years of actual work; in a very real sense, it is the culmination of decades of preparation.

It would be impossible to properly acknowledge even just those who directly contributed to this thesis. I must limit myself to the most prominent and most representative.

The list naturally must begin with God. This research weaved together so many different threads of my life and my interests into a single fabric in a way nothing short of wondrous. The conspiracy of circumstances that led me to shift away from my PhD plans to the games industry, only to have that PhD foisted on me in a completely different shape a decade later is remarkable. Such “coincidences” don’t grow on trees, so I can only hope I have fulfilled to the best of my abilities the task that, evidently, had been assigned to me from the very top.

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## Dedication

I did not include the Aboriginal people of Australia in the acknowledgements, either as a group nor as individuals, though I owe much to many. It's not that their support made the thesis possible, though it did; rather, *they were the whole point of it*. I have remained enchanted with the Australian Aboriginal culture and the resilience of its people ever since my first encounter, nearly two decades ago. It is with the hope my work will in some small way contribute to the future of Aboriginal culture, that I humbly dedicate this thesis to the Aboriginal people.

## List of publications

Over the course of this project, several related works were presented or published by the author. Below is a list of the papers, conference presentations, and non-academic public presentations that emerged either as extracts from the thesis or as offshoots exploring lateral but related topics.

- Majewski, J. (in press). Playing with intangible heritage: video game technology and procedural re-enactment. In L. Smith and N. Akagawa (eds.), *Intangible heritage: the practices and politics of safeguarding*. London: Routledge.
- Majewski, J. (2017). The Potential for Modding Communities in Cultural Heritage. In Mol, A. A. A., Aries-Vandemeulebroucke, C. E., and Boom, K. H. J. (eds.), *The Interactive Past: Archaeology, Heritage, and Video Games*. Leiden: Sidestone Press, pp. 185-205.
- Majewski, J. (2017). The Elder Scrolls: Pen & paper goes digital. In R. Mejia, J. Banks, & A. Adams. (eds.), *100 Greatest Game Franchises*. Lanham: Rowman & Littlefield, pp. 52-54.
- Majewski, J. (2016, November). *Oldest Culture, Newest Medium: What Emerges from The Clash?* Paper presented at Digital Games Research Association (DiGRA) Australia 2016 National Symposium, Swinburne University, Melbourne. Paper available at [https://www.academia.edu/33180968/Oldest\\_Culture\\_Newest\\_Medium\\_What\\_Emerges\\_from\\_the\\_Clash](https://www.academia.edu/33180968/Oldest_Culture_Newest_Medium_What_Emerges_from_the_Clash)
- Majewski, J. (2016, November). *Games and culture: what have they got to offer to one another?* Public presentation at the Exploring Worlds of Thought and Play IGDA webinar. Available online at <https://www.youtube.com/watch?v=8AqNOjWTpl>
- Majewski, J. (2016, April). *The Potential for Modding Communities in Cultural Heritage*. Paper presented at Interactive Pasts: Exploring the intersections of archaeology and video games, Leiden University, Leiden. Available online at <https://www.youtube.com/watch?v=DXlexVle57M>
- Majewski, J. (2015) Cultural Heritage in Role-Playing Video Games: A Map of Approaches. *Furnace* (2), pp. 24-36.
- Majewski, Jakub. (2015, June). *Approaches to cultural heritage in role-playing games*. Paper presented at Digital Games Research Association (DiGRA) Australia Conference 2015: Inclusivity in Australian Games and Game Studies, University of New South Wales, Sydney.
- Majewski, J. (2014). Transmitting and Preserving Cultural Knowledge Through Open-World Role-Playing Games. *Role of Higher Education Institutions in Society: Challenges, Tendencies, and Perspectives* (1 (3)), pp. 130-136.

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## Table of abbreviations

<i>Advanced Dungeons &amp; Dragons</i>	AD&D
Artificial intelligence	AI
Authorised heritage discourse	AHD
<i>Assassin's Creed</i>	AC
Computer role-playing game	cRPG
Cook Inlet Tribal Council	CITC
Council of Australian Governments	COAG
Cultural heritage	CH
Digital versatile disc	DVD
Did not participate	DNP
Downloadable content	DLC
Dungeon master	DM
<i>The Elder Scrolls</i>	TES
<i>The Elder Scrolls Construction Set / Creation Kit</i>	CS
<i>The Elder Scrolls Online</i>	ESO
The Elder Scrolls Wiki	ESW
Game guide	GG
The Imperial Library	TIL
Intangible cultural heritage	ICH
Intellectual property	IP
International Council on Monuments and Sites	ICOMOS
Journal session	JS
Live action role-playing game	LARP
Massively multiplayer online game	MMO
Massively multiplayer online role-playing game	MMORPG
<i>Mount &amp; Blade</i>	M&B
<i>Mount &amp; Blade: With Fire and Sword</i>	WFaS
Non-government organisation	NGO
Non-player character	NPC
Passionate affinity space	PAS
Question	Q
Research question	RQ
Role-playing game	RPG
<i>Suvarnabhumi Mahayuth</i>	SM
Two-dimensional	2D
Three-dimensional	3D
United Kingdom of Great Britain and Northern Ireland	UK
United Nations	UN
United Nations Educational, Scientific and Cultural Organization	UNESCO
United States of America	USA
The Unofficial Elder Scrolls Pages	UESP
User interface	UI
Virtual heritage	VH
<i>World of Temasek</i>	WoT
<i>World of Warcraft</i>	WoW
World of Warcraft Wiki	WoWWiki
What you see is what you get	WYSIWYG

# Chapter 1: Introduction

# 1 Introduction

Can video games help to keep Australian Aboriginal culture alive?

This thesis combines opposites. It claims the world's oldest continuous culture can benefit from integrating the world's newest medium into its cultural practices. It contends the very serious problem of Aboriginal cultural loss can be countered using means as playful and trivial as video games. It also argues cultural learning can be improved by comparing real culture to the fictional cultures of media-based imaginary worlds; that it is in fact productive for cultural heritage (CH) practitioners to apply the means and practices used by the builders of imaginary worlds. In short, this thesis contends it would be valuable to present Aboriginal culture in the form of a video game.

The validity of the potential benefits of video games for heritage are explored by examining one type of video game, the open-world role-playing game (RPG), as exemplified by *The Elder Scrolls V: Skyrim* (2011). The methods employed by *Skyrim* to build a convincing virtual world are dissected to show how open-world games convey to their players an imaginary world in its environmental, social and cultural aspects. The audience interactions around *Skyrim* are also investigated to demonstrate the potential benefits obtainable from allowing audiences to co-create CH projects. Finally, a series of interviews with experts from the fields of CH, virtual heritage (VH), and video games, are employed to better contextualise and situate the findings in indigenous heritage.

At the outset, it is necessary to briefly consider the initial claims made here, through two questions. Firstly, is Aboriginal culture at risk of cultural loss? Secondly, given the popular perception of video games as an object of low-brow popular culture (Robinett, 2003; Duggan, 2015), is there any reason to seriously consider them as a solution?

## 1.1 Aboriginal cultural loss

The loss of Aboriginal culture and cultural identity is a problem of enormous proportions and impact on the Aboriginal community; suicide rates among Aboriginal youths are four times as high as for other Australians, with some indigenous communities experiencing even higher rates (People Culture Environment, 2014). The Elders' Report into Preventing Indigenous Self-harm & Youth Suicide points repeatedly at the confusion of cultural loss as a major cause behind high suicide rates and many other social problems in Aboriginal communities, with Aboriginal Elder Bernard Tipiloura outright declaring support for Aboriginal culture "*a matter of life and death*" for his people (Tipiloura cited in People Culture Environment, 2014, p. 23).

The dimensions of cultural loss are too diverse to fully discuss within the scope of this thesis. Apart from ongoing losses of homelands and sacred sites (Sullivan, 1985), Indigenous Australian cultures have lost many elements of art and craft (Calvert, 1997; Grant, 2014), lifestyle, law and ritual (Trudgen, 2000). It has been argued 98% of all Indigenous Australian music traditions are now lost (Grant, 2014). Another aspect of cultural loss is language. Of the approximately 250 languages identified in Australia at the time of European settlement, over 100 have already been lost, and 90% of the extant languages are critically endangered, with limited intra-family transmission (Malcolm, 1998; Bowern, 2013). There is an intimate connection between language and culture, with even the structure of the language reflecting the culture's epistemological outlook (Watson & Chambers, 1989). Local languages convey the vocabulary of the local landscape and environment; for an oral culture, language is the key to accessing the culture's body of stories. Given this range of cultural losses, there is high demand for policies countering cultural loss and thus to improve well-being for the indigenous peoples of Australia (House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs, 2012; People Culture Environment, 2014).

The Council of Australian Governments (COAG) adopted the *Closing the Gap* framework as its strategy to empower Indigenous Australians, declaring Australian governments and indigenous groups will “*work together to achieve equality in health status and life expectancy between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians by the year 2030*” (Australian Indigenous HealthInfoNet, 2013a). The subsequent *National Indigenous Reform Agreement*, set reform targets in seven ‘building blocks’ including early childhood, schooling, health, economic participation, safe communities, and governance and leadership (Australian Indigenous HealthInfoNet, 2013b). Culture is considered fundamental to the building blocks, and “[i]nitiatives that strengthen Indigenous culture are therefore essential to Closing the Gap” (Office for the Arts, 2013).

Preserving and invigorating CH involves not only transmitting knowledge, but also a continual re-appraisal of tradition in the context of the present (Holtorf, 2011), a frequently divisive process (Howard, 2003). Colonial and post-colonial societies can fracture between those who see modernisation as synonymous with the adoption of the colonial power's culture, and those who wish to preserve tradition (Huntington, 2003). Such conflicts are deeply emotional, and especially acute for indigenous cultures due to their extensive dispossession (United Nations Department of Economic and Social Affairs, 2009). Tradition may be aggressively attacked as backward, narrow-minded, and ultimately a source of shame; among Indigenous Australians, younger generations often perceive their heritage negatively, causing them to turn away from their heritage (Trudgen, 2000; People Culture Environment, 2014).



For indigenous groups, one way to assist maintenance of CH is by increased representation in the media, especially through local indigenous media production (e.g. Wilson & Stewart, 2008, Lameman & Lewis, 2011). In Australia, two partially indigenous-produced media projects warrant attention for this thesis. The first is the feature film *Ten Canoes* (De Heer, 2006a). *Ten Canoes* was the first feature film to depict Aboriginal culture in its own context: an Aboriginal story about Aboriginal people, shown with Aboriginal actors speaking Aboriginal languages, acting out Aboriginal culture in Aboriginal milieus (Tudball & Lewis, 2006; De Heer 2006b). The film was successful enough to find a place within the Australian public education system (O'Hara, 2008). *Ten Canoes* also impacted the Yolngu community in Ramingining that worked on the film. By participating, community members improved their self-perception, gained appreciation of their own traditions, and recovered some lost traditions of material culture, such as the construction of bark canoes (De Heer, 2006b; Tudball & Lewis, 2006).

*Ten Canoes* is a form of historical fiction (de Groot, 2016), a popular method of propagating knowledge of the tangible and intangible cultural elements together making up what is called cultural heritage<sup>1</sup> (Howard, 2003). Historical fiction sacrifices complexity and accuracy for the sake of public accessibility, and consequently can be effective in popularising interest in heritage (de Groot, 2016).

The *Virtual Songlines*<sup>2</sup> project (Purtill, 2016) is another media project exploring Aboriginal culture from indigenous perspectives. This long-running project emerging out of the earlier *Digital Songlines* (Leavy, 2014) aims to re-create, as small virtual worlds, landscapes of key Australian cities as they appeared prior to European settlement, depicting local communities, traditions, and sites, for example Brisbane in *Virtual Meanjin* (Image 1).

*Virtual Songlines* builds on the practice of working with local indigenous communities to store traditional knowledge in digital formats (Michael & Dunn, 2006; Leavy, et al., 2007; Christie & Verran, 2013; Zaman, 2013). Aboriginal communities, including remote communities with poor technological access, can integrate digital tools into their knowledge practices (Christie & Verran, 2013). In line with other research indicating problems with the usage of traditional databases for indigenous knowledge (Zaman, 2013), Leavy uses the virtual world to convey Aboriginal culture, arguing a virtual world preserves the web of relations and connections between cultural elements and their environment (Leavy, 2014). This approach has generated highly positive and emotional reactions in Aboriginal audiences, excitement at seeing reconstructed cultural landscapes prior to colonisation (Funnell, 2015).

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<sup>1</sup> Throughout the document, terms specific to the fields of game scholarship, cultural studies and cultural heritage are used. See Appendix A for a glossary.

<sup>2</sup> <https://www.virtualsonglines.org/>



Image 1 Re-created Aboriginal landscapes of Brisbane in Virtual Meanjin (courtesy of Brett Leavy)

Leavy's argument links to broader discussions about the embedded, local and performative nature of Aboriginal knowledge practices (Christie, 2008), and how to best display and transmit this form of culture. From a museological perspective, this conversation pre-dates video games, at least to the mid-20<sup>th</sup> century Australian anthropologist W. E. H. Stanner. Writing in 1965, Stanner mused about how Australian Aboriginal culture could best be depicted in a museum – and whether this should even take the form of a museum exhibit. Stanner argued a display of tangible items could never adequately convey Aboriginal culture. He also understood, in accordance with more recent trends in museology (e.g. Gordon, 2005; Ackley, 2009; Kreps, 2009) the need for strong Aboriginal participation in the curation of Aboriginal heritage. He therefore proposed to display *“the whole record of Aboriginal life, ancient and recent, especially but not only its art, handicrafts and theatrical rituals”* through a *“genial conspiracy of audio-visual experts and sculptors, modelers, map and diorama makers, painters and the like”* (Stanner, 1979, pp. 193-194), and with an Aboriginal performative element. Stanner's approach, however, still predicated on a museum display, away from the local context of the land, central to Aboriginal culture (Watson & Chambers, 1989; Christie, 2008), and most indigenous cultures (Burger, 1990). A virtual world can depict the land (Leavy, 2014), constituting a holistic, virtual re-creation, re-enactment, and expression of culture where tangible CH aspects are shown interrelating with the intangible (Majewski, in press). While virtual re-creations are limited in physical interaction to a virtual sense of tangibility (Schut, 2016), they can depict the intangible, maintaining connections between the land, people,

objects, and culture. Given these affordances, virtual worlds can be a valuable tool in the heritage practitioner's toolbox.

Leavy's virtual worlds are built on game technology, contain game elements, and in some audience tests, the players have requested typical game devices such as quests be added (Wyeld, et al., 2007). Nonetheless, Leavy does not see them primarily as games, highlighting their serious nature in literature (Leavy, 2014) and in personal conversations. This leads to the second question that must be examined to justify this project. Given the extreme seriousness of the challenge of cultural loss, can video games be a solution?

## 1.2 Video games research and cultural heritage

Academic research investigating the role of games in culture has developed over more than a century, from Culin's (1907) ethnographic investigation, through Huizinga's (1949) and Caillois' (2001) exploration of play in human culture, to the recent studies of video games (Aarseth, 1997; Murray, 1997; Berger, 2002; Juul, 2005). Over the past 50 years, growth in computational capacity has led to a migration of games from parks and parlours to computer, video systems and mobile phones, in turn generating interest in exploring video games from diverse perspectives, including fields such as media studies, social and information sciences (Wolf & Perron, 2014). Areas of research have included gaming subcultures (Mäyrä, 2008; Newman, 2008; Crawford, 2012), the role of games in participatory culture (Jenkins, 2006; Gee, 2013), education (Gee, 2003; 2013; Squire, 2011), and social change (McGonigal, 2011). Games have also been the subject of philosophical inquiries (Bateman, 2011), and used to illustrate philosophical (Wittgenstein, 1968; Cogburn & Silcox, 2009) and theological questions (Wise, 2014).

As a new medium, video games<sup>3</sup> have naturally attracted research concerning their potential for harm, including addiction and socialisation issues in relation to violence (Anderson & Ford, 1986; Durkin, 1995; Dietz, 1998; Dill, 2007; Anderson, et al., 2010). These studies have not found games to be any more harmful than other media (Schott, 2016), although the interactive element of games does raise ethical issues. Examples of the latter include the ability of games to lead players through ethically challenging situations (Sicart, 2009; 2013), especially procedural rhetoric, or the ability of games to convey an argument procedurally through the rules of the game world (Bogost, 2007a). Simultaneously, as video games expanded as both an entertainment industry and a branch of the computational sciences, questions regarding the nature and utility of such games were raised about the potential for benefit

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<sup>3</sup> Henceforth, games and video games used interchangeably. Non-digital games are not discussed, except when noted.

(Malone, 1980; Prensky, 2001; Juul, 2005; Egenfeldt-Nielsen, 2006, 2007); procedural rhetoric again being a consideration (Bogost, 2007a).

Research on games for training and education has led to a new understanding about the way games attract and retain attention (Gee, 2003; Van Eck, 2010), increase participation (Squire, 2011; Gee, 2013), and optimise learning including information reception and retention, particularly through gamification (Kapp, 2012). Contemporary scholarship in this area has led to the use and development of games for training and education (Egenfeldt-Nielsen, 2007; Barrett & Johnson, 2010; Johnson, 2010). The use of games for culture is prominent, where Leavy's (2014) *Virtual Songlines* taps into a longer avenue of research exploring the use of video game technology for serious depictions of culture (e.g. Kardan, 2006; Champion, 2006; Lim, 2012). In terms of educational considerations, video games incorporate what Gee (2003; 2006; 2013) argues are strong educational qualities; they encourage players to develop an empathy and understanding for their characters. Players become invested in the game world, learning the logic motivations of the game system, the world and the society depicted in the game (Schut, 2007).

The educational properties of games have encouraged research in so-called serious games (Egenfeldt-Nielsen, 2005; Aldrich, 2009; Anderson, et al., 2009) and game-based learning (Felicia, 2013; Lacasa, 2013). Such research illustrates connections between game play and the learning, understanding, and maintenance of culture. Kardan (2006) reports on a project exploring Hawaiian traditional culture through the development of the role-playing game (RPG) *Ohana* (2006), while Lameman and Lewis (2011) describe a workshop empowering First Nations Canadians to explore their culture through game creation. A similar form of school intervention, ultimately not realised, had been proposed for Indigenous Australians (Anderson, 2007; Anderson & Courtney, 2011). Elsewhere in Australia, apart from the *Digital/Virtual Songlines* project spearheaded by Leavy (2014), there have been smaller Aboriginal and Torres Strait Islander-themed games, game modifications, and apps (Matheson, 2015; Loban, 2016a; 2016b). Although rare, there have been examples of government agencies organising the development of CH games as part of broader government educational policy. For example, the massively multiplayer online RPG *World of Temasek* (2011) was developed collaboratively by industry and academia (Lim, 2012) at the behest of Singapore's National Heritage Board, for use in public education. Analogously, the non-government organisation (NGO) Cook Inlet Tribal Council in Alaska collaborated with developers to develop the action game *Never Alone* (2014) (Roberts, 2015). Public and private institutions of higher learning and cultural heritage have also used the sandbox-style game *Minecraft* (2011) to enhance learning (Brand, de Byl, Knight, & Hooper, 2014) and to present reconstructions of sites and artefacts (McGraw, Reid, & Sanders, 2017).

A visible constraint of the presented cultural game efforts is that, other than some isolated cases, many short-lived, these efforts have tended to concentrate on small-scale visualisations. Even the largest project described here, Leavy's *Virtual Songlines*, has been accessible to the public primarily through short-term museum exhibitions such as the *Virtual Warrane II* exhibit in 2012 in Sydney (Pandya, 2012)<sup>4</sup>.

The play-oriented virtual worlds of commercial video games are more accessible, and their cultural content has also been scrutinised. Video games are a diverse medium, and multiple genres have been used to explore culture, with notable examples among strategy games (Egenfeldt-Nielsen, 2007; Squire, 2011; Pitruzzello, 2013); however, it is RPGs and action-adventure games, where the player is cast as a character exploring a relatively open virtual world, that have attracted much of the research in this area.

The attraction of RPGs and action-adventure games for CH lies in the way virtual world-based games seem to maximise the use of the four core affordances of the interactive medium, participation, procedurality, spatiality, and encyclopaedic capacity (Murray, 1997, 2012), to offer an immersive and subjective experience in a concrete, virtually tangible (Schut, 2016) place. In an RPG like *The Elder Scrolls*, the player participates in the virtual world of the game in a way comparable to an actor in a film, but with far greater control and freedom to explore the world (Majewski, 2003). Where film audiences witness actors exploiting the affordances<sup>5</sup> or possibilities of action provided by the setting, game players must explore and use affordances directly, gaining greater understanding of how the depicted world functions (Schut, 2007). Many games, but especially RPGs, enable the player to become immersed in virtual worlds (Wolf, 2012), and potentially achieve a sense of environmental, cultural and social presence (Champion, 2007; Bostan, 2009), a sort of virtual tangibility (Schut, 2016).

Among virtual world-based games, Champion (2006; 2007) examined the social and cultural dimensions of the role-playing game *The Elder Scrolls IV: Oblivion* (2006). Several authors (Johnson, 2013, Daun, 2014; Sołtysiak, 2015) have explored the depictions of Scandinavian cultures in *The Elder Scrolls V: Skyrim* (Image 2). The *Assassin's Creed* (2007-2017) action-adventure series has also been prominent, with its cultural and historical content explored by El-Nasr, Al-Saati, Niedenthal, and Milam (2008), as well as by Whitaker in several co-authored presentations (e.g. Whitaker & Glass, 2013; Whitaker & Luther, 2014; Whitaker & Andress, 2015). Mochocki (2011; 2017) and Majewski (2014) analysed Polish-Lithuanian heritage in the pen-and-paper RPG *Dzikie Pola* (1997) and the digital RPG *Mount & Blade: With Fire and Sword* (2011). Majewski (2016) also examined the presence of Aboriginal culture in video

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<sup>4</sup> The *Virtual Songlines* website indicates Leavy is launching a page on the Patreon crowdfunding platform, where donations over \$25 will be rewarded with access to the recent *Virtual Kamay* (in development) project.

<sup>5</sup> Affordances are the possibilities of action provided by a specific environment and props, to a specific actor. For a more detailed explanation of the concept of affordances, see Pols (2012). Linderoth (2010) discusses affordances in the context of games and education.



games, and compared the cultural depictions of historical South-East Asia in *World of Temasek* and *Suvarnabhumi Mahayuth* (2012), a player-developed modification for *Mount & Blade: Warband* (2010) (Majewski, 2017a). These studies point to potential CH uses of commercial games and serious game adaptations of commercial game engines, while also indicating problems with accuracy and over-simplification.

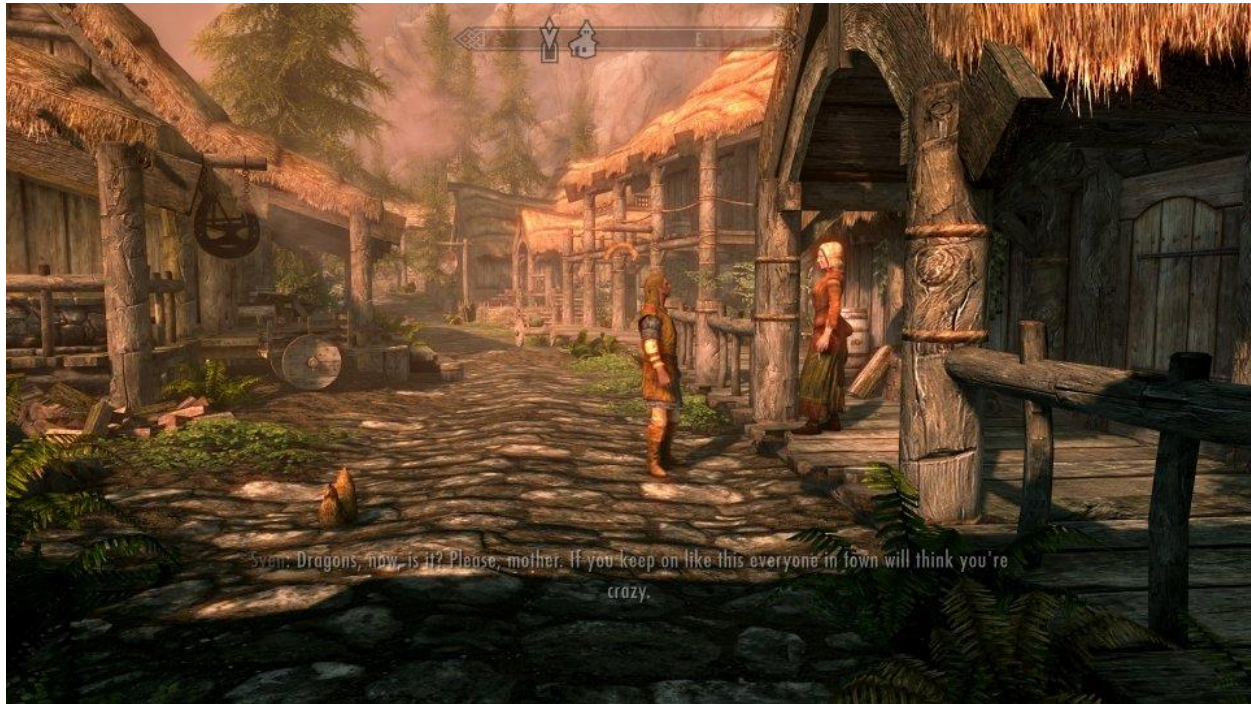


Image 2 Reimagined Scandinavian cultural landscapes of Skyrim (Special Edition)<sup>6</sup>

A different line of research on the confluence between commercial games and CH has concentrated on the transfer of know-how between serious game developers and commercial game developers. Some serious game scholars have analysed the ways in which commercial games could be further improved from their perspective (e.g. Johnson, 2013; Champion, 2015). Others, like Granström (2013), argue serious game developers can benefit by imitating commercial game practices, or commercial games can form the basis of culture-oriented projects through extensive modification of content (Francis, 2011; Champion, 2012b; Fassbender, 2012; Underberg, 2012; Majewski, 2017a). In this strand of research, open-world RPGs especially have been scrutinised, including *The Elder Scrolls* (1994-2017) series and particularly *The Elder Scrolls V: Skyrim* (e.g. Johnson, 2013; Granström, 2013; Champion, 2015).

There is thus a body of literature hinting at the possibilities of using or adapting video games for cultural education and preservation. This thesis continues this research by examining *Skyrim* and its player

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<sup>6</sup> All game images from author unless otherwise noted.

community, in the Australian Aboriginal and more broadly indigenous context. Virtual worlds may be a powerful tool for indigenous heritage, but their value and optimal features require analysis.

Consequently, this research explores the adaptation of commercial RPG world-building and audience engagement practices to produce recommendations enabling the development of strong virtual worlds for indigenous virtual heritage.

### 1.3 Research questions and objectives

This project explores the use of open-world digital RPGs for CH transmission and preservation. It is positioned at the confluence of three areas of research – media studies, audience studies, and Indigenous Australian heritage.

The overarching question for the study is, how can open-world RPGs like *Skyrim* contribute to the transmission of Aboriginal heritage? *Skyrim* has garnered scholarly attention because of its complexity as a virtual world (e.g. Johnson, 2013; Granström, 2013; Daun, 2014; Champion, 2015). Granström (2013) conducted a meta-analysis of previous virtual heritage studies to identify a list of virtual world or game elements seen to be useful for heritage. Her study then examined four commercial video games including *Skyrim*, *Assassin's Creed II* (2009), *Mass Effect* (2007), and *Red Dead Redemption* (2010) to identify which elements were present in each game. Granström ultimately concluded these commercial games offer strong benchmarks for VH projects, with *Skyrim* most closely matching heritage requirements. However, as a master's thesis, Granström's work could not go into sufficient depth in either her review of the useful elements or the analysis of the games, and does not offer any useful guidelines for VH developers; it also lacked the space to contextualise virtual worlds more deeply in research on presence (e.g. Champion, 2007; 2015) or immersion in imaginary worlds (e.g. Wolf, 2012).

Another aspect of investigation in this thesis concerns the active audience, or participatory fan communities (Jenkins, 1992; 2006). Fan cultures generate a multi-layered engagement with the object of affection (Hills, 2002), and many games support player communities that coalesce in what Gee (2013) and Squire (2011) call passionate affinity spaces (PAS). Like non-game fan communities (Jenkins, 1992), players are productive, creating videos (Puente & Tosca, 2013), compiling data into wikipedic databases (Hunter, 2011; Squire, 2011), and modifying the game itself (Champion, 2012a; Christiansen, 2012). Players in many cases produce game modifications (mods) aiming to incorporate heritage content into games, or to improve existing content (Majewski, 2017a), raising questions about the potential value of direct collaboration between heritage practitioners and game communities. The question, then, is whether it is possible to generate something akin to fandom around an indigenous culture, encouraging especially indigenous players to reappraise indigenous CH as an object of pride and fascination. To

explore this issue, *Skyrim*'s fan community needs to be examined, to better understand what the community does, and why it is so engaged. This aspect is likely to be connected to the world-building of *Skyrim* as an imaginary world, because world-building methods seem to be generally connected with the ability of given worlds to attract a lasting audience (e.g. Wolf, 2012).

Finally, the findings from *Skyrim* need to be contextualised and grounded in indigenous CH, to collect data allowing to determine the extent to which a game like *Skyrim* can fulfil the requirements of indigenous CH. This grounding can be achieved by engaging with experts connected to three areas: indigenous heritage, virtual heritage, and game studies and development. Interviewing experts in these areas can provide information on indigenous CH requirements, the constraints and challenges of productively and respectfully collaborating with, or *for* indigenous communities, and the game industry's capacity to respond to these challenges.

The thesis aims to investigate *Skyrim* as a game and its construction as a virtual world; to investigate *Skyrim*'s players and their activities in the PAS coalescing around the game; and finally, to contextualise these findings by examining the requirements and challenges involved with indigenous CH.

These aims are expressed in the following research questions:

1. How is *Skyrim* constructed to enable players to experience tangible and intangible heritage in its environmental, social, and cultural aspects?
2. How and why do *Skyrim* players explore and popularise cultural heritage presented in RPG worlds through participation in online passionate affinity spaces?
3. What core game and project design features can be identified to support the dissemination of Indigenous cultural heritage in open-world RPG games, in terms of world-building, and in terms of supporting appropriate cultural management mechanisms and indigenous audience engagement?

## 1.4 Object of study

The study approaches the topic through *The Elder Scrolls V: Skyrim*, the fifth game in the critically and commercially successful *Elder Scrolls* series<sup>7</sup>. This series is an appropriate object of study, because it emphasises world-building in deep and detailed cultural (Monken, 2008) and natural worlds (Miller, 2009). It has attracted scholarly attention for the freedom of exploration and interaction granted to players (Aarseth, 2003; Barton, 2008), and for its attempts to create a sense of social and cultural

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<sup>7</sup> The three most recent games in the series, *Morrowind*, *Oblivion*, and *Skyrim*, have garnered review scores of 89%, 94% and 94% respectively (Metacritic, 2002; 2006; 2011). *Skyrim* is reported to have sold over 23 million units by 2013 (The Statistic Brain, 2013), and 30 million by 2016 (Suellentrop, 2016).



presence (Champion, 2007; 2015; Tanenbaum, 2008; Bostan, 2009; Granström, 2013). Also of note are the deep engagement of players with their characters and their cultural world (Gee, 2006; Waggoner, 2007; 2009; Johnson, 2013), the support for significant levels of user modification (Bostan, 2005; Flarup, 2009; Partorp, 2009; Champion, 2012b), and the resulting vibrant and creative player community (Puente & Tosca, 2013; Majkowski, 2016). Describing an earlier *TES* game, game historian Matt Barton notes “[t]he draw here is that of entering a fictional but fully convincing world – a sort of virtual *Renaissance Fair*” (2008, p. 283).

The series includes five major games released on the PC and the Xbox, Xbox 360 and PlayStation 3 consoles between 1994 and 2011, as well as several smaller spin-off products. The extensive size of the games, which provide sufficient content to explore for as much as 200 hours (Monken, 2008), renders it impractical to examine the entire series. Because ongoing evolutionary developments in video game design and technology mean every new game in the series introduces new world-building tools and methods, the study is constrained to the most recent single-player *TES* game, *Skyrim*.

*Skyrim* is a single-player open-world computer RPG (cRPG). CRPGs have their origin in pen-and-paper, or tabletop RPGs, especially *Dungeons & Dragons* (1974) (Barton, 2008). In a typical cRPG, the player will control a character or group of characters, who pursue a quest to overcome evil threatening the safety of the world (Howard, 2008; Bainbridge, 2013). Along the way, players develop their character(s); character development is a strong focus in the case of single-character cRPGs where the player is connected to their on-screen character or avatar (Waggoner, 2009). Players develop their avatars by managing their appearance, quantifiable character skills and by obtaining and using progressively better items (Barton, 2008, Hitchens & Drachen, 2008). Historically, RPGs emphasised progression through combat, often resolved through statistics and virtual dice rolls (Barton, 2008), but recently cRPGs have shifted towards more free-flowing, action-based approaches (Majewski, 2017b).

The open-world cRPG is a subgenre distinguishable by an emphasis on the player’s freedom to explore the game world (Barton, 2008). It is a game of emergence in the sense of allowing the player to set their own goals (Juul, 2005), and can be likened to an amusement park, where players determine the order in which they approach different places and activities (Majewski, 2003). By contrast, non-open-world games limit the player’s capacity to diverge from the story, favouring linear progression through world and story over emergence (Juul, 2005). Some examples of open-world RPGs include the *Ultima* series (1981-2013), *Sid Meier’s Pirates!* (1987; 2004), *The Elder Scrolls* (1994-2017), *Gothic* (2001-2006), *Two Worlds* (2007-2010), and *Mount & Blade* (2008-2011) series. Because of their reliance on the open world as a core gameplay attraction, open-world RPGs have developed substantial virtual world-building techniques. Many modern RPGs strive, if not always successfully, to immerse the player in a rich social

and cultural world (Champion, 2007; 2015) allowing players to develop an empathetic understanding of the society inhabiting this world (Gee, 2006). Although combat remains a key gameplay element (Hayse, 2014), recent open-world RPGs have developed more diverse gameplay models beyond epic quests and violence.

*Skyrim* transports the player into the imaginary world of Nirn, and specifically a part of the world called the Skyrim province. When the game begins, the player experiences a short linear narrative sequence establishing the most important narrative events of the game: the return of the legendary world-destroying dragon Alduin, and the civil war currently raging in Skyrim. During this sequence, the player creates their character, choosing from one of ten racial options including fantasy races and several human ethnic groups, also defining the character's appearance. Once the linear introduction ends, the player character is effectively free to explore the game world, with a range of different cities and smaller locations to visit. There is a main quest involving the defeat of Alduin, which the player is encouraged, but not forced, to continue; beyond this, the world is filled with numerous other quests ranging from the large-scale civil war in which the player can help one or the other side to victory, to the trivial, like aiding a character in recovering their lost... spoon. The countryside between cities is filled with smaller settlements and various types of dungeon-like locations, ranging from actual dungeons to natural caves and ancient abandoned sites of past civilisations. While much of the gameplay revolves around combat, the player also talks to non-player characters to discover more about the world and its affairs; players may even get married and adopt, though not bear, children. The game facilitates many smaller activities, ranging from the crafting of new items such as weapons, armour and various special potions, through cooking, to hunting and gathering resources such as plants, fruit, and mineral ores. Most of the game's activities and locations are summarised in an official game guide (Hodgson, Stratton, & Cornett, 2013), and the scope of the game is best illustrated by this guide's length: over 1100 pages.

*Skyrim* has attracted a strong community, a part of a broader *Elder Scrolls* fandom. This community is an appropriate target for investigation through conjunction with the study of *Skyrim* itself. However, the community is also an appropriate target due to its intrinsic features; it is a large community performing a broad range of activities. The core activities of the community include the production of mods (modding), of which close to 100,000 have been produced (Majkowski, 2016), and the collation of lore or knowledge about the game world in the style of a wikipedia typical to player communities (Squire, 2011). Finally, the community also produces videos engaging with the game world in both encyclopaedic ways, discussing its contents, and creatively, through costume plays (Puente & Tosca, 2013). These considerable player efforts warrant closer attention.

## 1.5 Thesis structure

The present chapter introduces the thesis, explaining the rationale behind the investigation of video games as a means for the transmission of culture in the Australian Aboriginal context.

Chapter 2 reviews the literature relevant to the project, spanning three major areas; media studies, heritage studies, and the sub-area of virtual heritage forming at the intersection of the first two. The first part of the chapter summarises the research on imaginary worlds as a transmedia phenomenon before focusing on virtual worlds and their defining factors of immersion and presence. This is followed by an examination of fandom and video game player activities in the affinity space. The second part then summarises the evolution and main functions of heritage, key strands of research in the area, before concentrating on the requirements and challenges of indigenous CH, and Australian Aboriginal heritage specifically. The final part of the chapter summarises research on VH, the approaches to heritage taken by different types of video games, and briefly discusses past depictions of Australian Aboriginal culture in video games.

Chapter 3 continues the literature review, concentrating on open-world RPGs and *The Elder Scrolls (TES)*. A historical overview of the RPG genre is provided, followed by a summary of *TES* as a transmedia property. Subsequently, existing literature on *TES* is examined, which in many cases (e.g. Champion, 2007; 2015; Granström, 2013; Johnson, 2013; Daun, 2014) connects the series to CH issues. Finally, a truncated history of the series and of the player activities in PAS around the series is presented.

Chapter 4 outlines the project methodology. The thesis contains three separate studies. The first study invokes media studies to examine the world-building methods visible inside *Skyrim* using a qualitative, immersive autoethnography approach (Cuttell, 2015). This component is not a study of *Skyrim* itself; rather, the game is examined to identify the tools and tactics the game's designers employed to build and depict the imaginary world in its virtual form through the game, building on earlier work by Granström (2013), Champion (2006; 2007; 2015), and Wolf (2012). Subsequently, social sciences are invoked to perform a quantitative survey of the members of *Skyrim*'s game modification (modding) and lore-oriented PAS (Squire, 2011; Gee, 2013). The survey explores the motivations and modus operandi of players within the PAS. Finally, a set of expert interviews is used to empower a requirements analysis for the preservation and popularisation of Aboriginal and indigenous CH. The requirements examined include game features, collaboration requirements, and project deployment considerations. A final part of the methodology is the synthesis of the three studies.

Chapters 5, 6, and 7 report the findings of the three studies. The world-building analysis of *Skyrim* in Chapter 5 summarises the features recorded in the autoethnographic research journal augmented by

*Skyrim* literature, not the least of which being the official game guide (Hodgson, Stratton, & Cornett, 2013). The world-building features of *Skyrim* are divided into primary world-building components, secondary non-diegetic world-building components, broader world-building structures, and finally, an implementational strategy containing a subset of knowledge management tactics and world exploration tactics. These findings, while gathered here for heritage purposes, are also of interest to scholars examining RPGs, and world-building across imaginary and virtual worlds.

Subsequently, in Chapter 6 the *Skyrim* audience survey reports on the overall demographics and engagement history of the sample, followed by closer examinations of the modding and lore communities. In both cases, the relevant part of the sample is broken up for comparison purposes into subgroups based on intensity of engagement. Apart from their CH implications, these findings are noteworthy for researchers of game fandom and PAS activities

Finally, in Chapter 7, the expert interviews are presented in sections of thematically grouped interview questions. These sections include a set of introductory primer questions, world-building and heritage questions, and finally a section on cultural management mechanisms. The findings in this chapter are primarily of interest for CH studies.

Chapter 8 synthesises the three studies, re-examining the results of the analysis of *Skyrim* and its audience in light of the views of the experts collected through interviews. The findings in this chapter are of relevance primarily to CH practitioners interested in exploring the use of virtual worlds for the transmission of culture.

Finally, Chapter 9 concludes the thesis, recapping the main findings. The limitations of the three studies are also discussed, along with a discussion on possible avenues of future research.

The thesis is accompanied by references for both literature and video games. A separate second volume contains appendices A to J, including a glossary, collected data, and other materials gathered during the three studies.

# Chapter 2: Literature review: Games research and cultural heritage

## 2 Literature review: Games research and cultural heritage

An analysis of *Skyrim* and its audience in the context of cultural heritage must be preceded by reviewing the relevant literature. The present chapter first reviews media research concerning imaginary worlds in various media, the virtual worlds of video games, and game audiences. Next, the relevant areas of cultural heritage (CH) studies are examined. The chapter concludes with a review of the field of virtual heritage (VH), which forms a natural synthesis of the main areas of investigation. This last area concentrates on the direct application of video games for CH purposes. The chapter does not include a detailed examination of the RPG genre or *The Elder Scrolls*, which for the reader's convenience have been separated out into Chapter 3.

### 2.1 Video games research and audience studies

The definition of a video game is a contested one (Juul, 2005; Arjoranta, 2014). For this study, a game is any entertainment-oriented video application with an identifiable player role and what Aarseth (1997) calls ergodic interactions, which require non-trivial effort from the player.

Berger (2002; 2014) describes the study of mass mediated texts like video games as involving the examination of one or more of five focal points. These include the text or artwork, the artist who created the text, the receiving audience, the society in which the text is created and received, and finally, the nature of the medium used to convey the text. The examination of games therefore encompasses each of these five focal points (Figure 1), multiplied by the many different disciplines that can be triangulated at any given point.

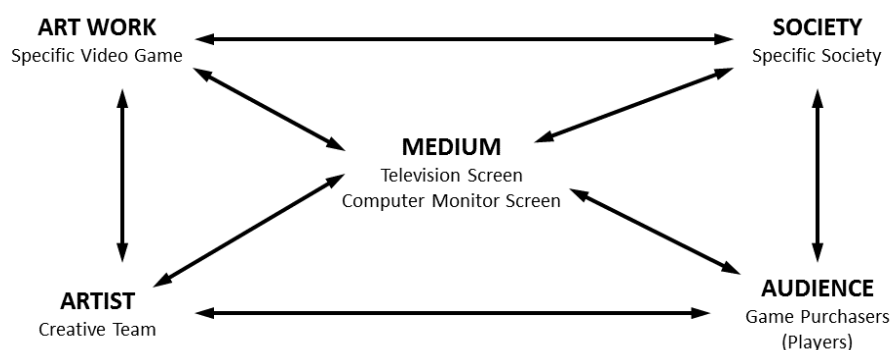


Figure 1 Focal points in the study of mass media texts (Berger, 2002)

This research concentrates on the focal points of the text, the audience, and the medium. In this context, the author identified three main areas of games and audience research relevant to the examination of the world-building mechanisms of *Skyrim* and the activities of its audience. First, imaginary worlds are investigated in terms of their construction through media texts and through

ongoing engagement with the audience. The outcome of successful engagement in an imaginary world on the audience is also examined. Second, the two related concepts of immersion and presence are examined to see how the medium of video games supports the successful construction of virtual depictions of imaginary worlds. Factors specific to the RPG genre and *The Elder Scrolls* are highlighted. Finally, the phenomenon of participatory culture and the active audience are reviewed together with the related concept of the affinity space. The literature linking the intrinsic qualities of the game medium and of individual texts (game and non-game) that foster participatory engagement through affinity spaces is also examined.

### 2.1.1 Imaginary worlds

The academic concepts of imaginary worlds and world-building understood as the practice of creating imaginary worlds regardless of medium, arose partially out of the philosophical concept of possible worlds (Wolf, 2012), or the investigation of how the world could be if some event had occurred differently (Planells de la Maza, 2017). The philosophy of possible worlds had been employed by literary scholars Marie-Laure Ryan (e.g. 1980, 2001) and Lubomír Doležel (2000) to examine the relation between fiction and reality, arguing fictional worlds, while not real, are also not false; fiction transports the reader into an alternative world in which its events are true. Doležel defined fictional or imaginary worlds as distinct entities, incomplete but separate from the real world. These worlds are constructed through language, and so constrained not by the possibilities of reality but the limits of imagination and expression. Doležel's fictional world does not necessarily mimic reality, but is related to it; a relevant concept is Ryan's principle of minimal departure, where fiction is interpreted by the reader "*as being the closest possible to the reality we know*" (Ryan, 1980, p. 403).

Ryan, Doležel and other scholars exploring imaginary worlds from this perspective have explored the relationship between reality and fiction, and between reader and text; however, they did not analyse the contents or internal structures of imaginary worlds. Such contents were in turn examined by writers of fantasy (e.g. Alexander, 1971; Tolkien, 1988; Eddings & Eddings, 1999; Klein, 2012) and science-fiction (Gillett, 1996; Klein, 2012). These works provide a small body of theoretical recommendations for the practice of world-building. The writer-scholar J.R.R. Tolkien (1988) also provided a philosophical, even theological context to argue for the purpose and value of the act of world-building as subcreation, an imitation of divine creation.

Wolf (2012), has attempted to bring together the philosophical and practical threads of imaginary worlds and world-building in a broader theory of subcreation. While a similar concept of transmedial worlds was briefly described earlier (Klastrup & Tosca, 2004), Wolf's monograph and the two edited

collections that followed (Wolf, 2016a; Wolf, 2017) are so far the only holistic analyses of imaginary worlds, systematising their internal features and the processes of world-building across media. These studies show world-building as a practice is dependent on the medium. Different media provide different challenges and affordances for the depiction of, and interaction with imaginary worlds. Consequently, world-building practices and strategies must differ across media (Wolf, 2012). For Wolf, the concept of world-building also encompasses the audience's internal processes of translating the world depicted in a medium into the world imagined in their minds; this process is facilitated by world-building structures such as maps which aid audiences in imagining and conceptualising the world in question.

Imaginary worlds, as defined by Wolf, are experiential realms consisting of all locations that together function with a unified sense of place ontologically different from reality, conceived by one or multiple authors. Imaginary worlds exist independently of the media texts in which they are depicted. An imaginary world thus can be explored or accessed in multiple texts spanning multiple media, with each separate text both contributing to the subcreative act of world-building, but also simultaneously providing another window into this world. The latter part of Wolf's definition matches Klastrup and Tosca's (2004; 2014) transmedial worlds as abstract content systems with a repertoire of fictional stories and characters across a variety of media forms.

The relationship between imaginary world and the text which depicts it is similar to the filmic concept of diegesis, which has also been used in game studies (Jørgensen, 2013). In film studies, diegesis denotes the world of the story (Bordwell & Thompson, 2013). A distinction is made between film elements internal to the diegesis and those that, while still comprising an integral part of the work, are nondiegetic. Some examples of the latter include visual elements such as a title superimposed on the film image but invisible to the film's characters, or a musical theme audible to the audience but not to the characters. Jørgensen (2013) disagrees with the use of diegesis for video game worlds because game-specific extradiegetic elements like the user interface are an integral part of the gameplay experience. However, while a gameworld in Jørgensen's definition is more than a diegesis, it can still include a diegesis. An imaginary world is also not synonymous to the diegesis, with the former placing an act of imagination at the centre of world-building (Wolf, 2012), while the latter emphasises storytelling (Jørgensen, 2013). These differences, though noteworthy, here serve mainly to highlight different aspects of one broader concept.

Successful imaginary worlds grow in breadth and depth through the introduction of new products offering additional windows into the world (Wolf, 2012). What begins as a single work becomes a franchise, potentially a transmedial franchise (Klastrup & Tosca, 2004) where the imaginary world is



approached through the affordances of different media in a process Wolf defines as: description (literary media), visualisation (visual media), auralisation (sound-based media), and interactivation (interactive media). While new products are typically self-enclosed texts, another form of expansion occurs through what Gérard Genette (1997) calls paratexts; auxiliary works designed as companion pieces to the main text. Paratexts include film trailers, box art, posters, and other derivative marketing materials (Gray, 2010), game manuals and maps, but also more complex and virtually stand-alone works, such as reference guides (Consalvo, 2007) or art books.

In the imaginary world context, the concept of a paratext as an object serving as a companion piece supporting the main work is inadequate. From an industrial perspective, a reference guide detailing the imaginary world is simply an additional revenue stream for the franchise; but for the audience a companion piece may even be more significant than the main text because of the background information it provides about the imaginary world. It is more productive to regard complex paratexts like reference guides not as companion pieces, but as separate works within the broader franchise.

Smaller paratexts are often integrated with the main text. A common case is the map, a fundamental structure helping the audience make sense of the imaginary world's spatial dimensions world (Wolf, 2012). However, while in literature the map would be included within the book, video games have often presented maps and other paratexts outside of the game as separate material objects (Loguidice, 2004). In many cases, such as the map for *Skyrim*, the paratextual object is presented as a material extrusion of a diegetic map from inside the game's diegesis. Such diegetic paratexts are occasionally referred to as feelies, because they give the player the opportunity to physically touch something ostensibly from inside the game world (Karhulahti, 2012)<sup>8</sup>.

Imaginary worlds depend on their ability to convince their audiences to vicariously step in and inhabit them (Wolf, 2012). Eco (1987a) speaks about the cult movie as an object that must provide its audience with a completely furnished world to foster discussion. Jones (2000), claims for fans the attraction actually lies in the imaginary world's blank spots providing room for speculation. Wolf's (2012) in-depth analysis of imaginary worlds reconciles these views by stressing the importance of completeness, a sense that even when information about the fictional world is not provided by the author, it nonetheless exists, and could potentially be told. Game designer Jesse Schell (2015) makes a similar point by invoking the *distant mountains* analogy from Tolkien (Tolkien, 1988); these distant mountains are places, characters, and events whose existence is mentioned with minimal detail in the narrative, providing the

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<sup>8</sup> The concept of feelies is currently rarely invoked; possibly because many modern paratexts are distributed in digital forms, and do not offer the tangibility the feelie implied.

sense of a bigger world just outside the present story. Completeness depends on another Wolf (2012) concept: consistency, the sense there are no significant discrepancies in the available information; without consistency, not only is the imaginary world less plausible, but also it becomes harder for audiences to extrapolate the rest of the world.

Successful imaginary worlds combine Eco's sense of a completely furnished world with Jones' blank spots. Their success also requires them to draw their audiences into the world, a process explained through the three related concepts of immersion, absorption, and saturation (Wolf, 2012). Immersion, a concept extensively explored in various media and contexts (e.g. Lancaster & Mikotowicz, 2001; Ryan, 2001; Balzer, 2011; Calleja, 2011), for Wolf refers to not only physical and sensual immersion in the sense of experiencing a state of engrossment due to the sensual impact of the experience, but also conceptual immersion, where for example the readers of a book may find it has sufficient detail to immerse their thoughts in the imaginary world. In turn, absorption involves the audience pulling away from their primary world by absorbing details from the imaginary world, bringing them to mind, and letting the imaginary world dominate their minds. The more details the imaginary world bombards the audience with, the more absorbing the experience will be. Finally, saturation is the end point of conceptual immersion and absorption, the goal of providing the audience with a world so encompassing and full of detail they are unable to absorb it all at once, achieving overflow (Wolf, 2016b). Wolf concentrates on conceptual immersion, drawing absorption and saturation largely in conceptual terms. However, the sensual and physical levels of immersion affect the audience experience, contributing to a sense of presence (Ryan, 2001), as does interactivity (Calleja, 2011). The latter allows audiences to become actors in the game world (Majewski, 2003), providing them with multiple forms of involvement together building immersion (Calleja, 2011). Another aspect of immersion is consensuality – not merely suspending disbelief, but building secondary belief in a secondary world on top of the primary world as argued by Tolkien (1988) and echoed by Wolf (2012), or even, in the case of live experiences such as theatre and live-action RPGs, imposing a “*surplus reality*” on top of existing reality (Balzer, 2011).

Wolf (2012) describes a set of infrastructural elements that organise the imaginary world's content and allow audiences to make sense of the details of the world. The main form of organising infrastructure is the narrative, which initially is likely to exist as a single thread, but which in the long term is likely to develop into a braid of multiple interweaving narrative threads converging in the same direction, or even a fabric woven together from many threads moving in different directions. Other world-building structures include maps for geography, timelines and genealogy to organise the history of the world and relations between its inhabitants, and broader world-building elements defining the world in distinction to reality; its natural laws and ecologies, its cultures, languages, mythologies and philosophies. The more

these elements are developed, the more distinct the imaginary world becomes, and potentially more interesting; however, it also demands a stronger effort to coordinate between elements, and maintain a global sense of consistency and continuity.

Most successful imaginary worlds are commercial transmedial franchises (Wolf, 2012). A commercial imaginary world needs to continuously expand, filling in blank spots and bringing *distant mountains* closer through new texts and paratexts, while simultaneously creating new blank spots and mountains to generate demand for new products. However, growth brings in new audiences, who are thus introduced by the latest product rather than older ones (Wolf, 2012). This is especially true for game series like *The Elder Scrolls*, where newer products eclipse older ones in technology, cost of production and commercial success<sup>9</sup>. A game like *Skyrim*, cannot only magnify the *distant mountains* encountered in an earlier text; it should be self-sufficient for new audiences, while also encouraging them to vicariously engage with the whole franchise, seeking out other products.

When approached through a single text, the imaginary world fits well within Berger's (2014) five focal points of media studies. When, however, the imaginary world is approached through multiple works, it breaks out of Berger's model, effectively becoming an independent focal point (Figure 2), which may only be examined *through* the windows of individual media works (Wolf, 2012).

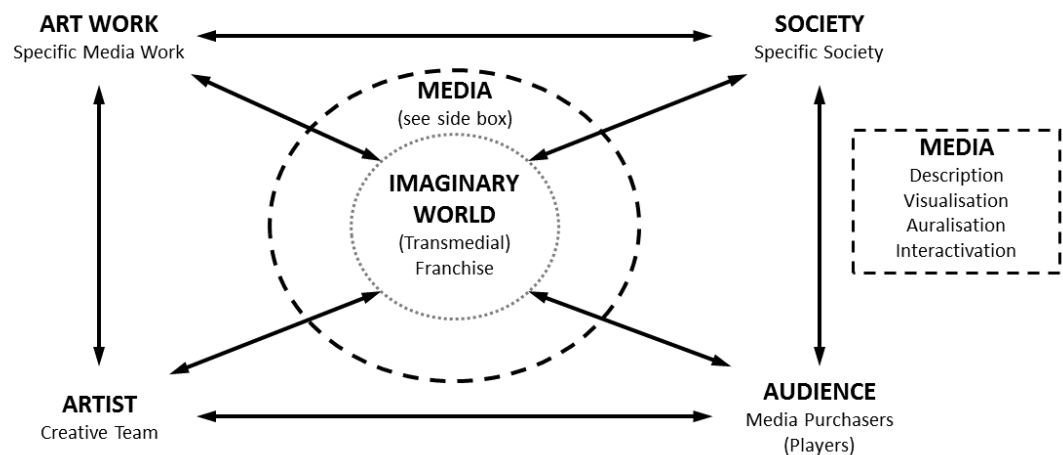


Figure 2 Approaching an imaginary world through Berger's mass media focal points. Based on Berger (2002) and Wolf (2012).

<sup>9</sup>Another problem for continuity across games stems from the inherent technological obsolescence of older games due to continuous improvements in digital technologies (Newman, 2012). For Tolkien's fans, the need to start with the earliest book is obvious. But even dedicated *Elder Scrolls* fans can struggle with the earliest two games in the series. *Arena* (1994) and *Daggerfall* (1996) were created with a noticeably different design philosophy (Majewski, 2017b), under radically different hardware and software limitations.

The complexity of imaginary worlds enables non-media scholars to enter the arena, examining the world through the framework of their specialisation. For instance, Tolkien's *Middle Earth* has been studied from the perspective of geology (Rogers & Rogers, 1980). To do so, the geologist accessed the imaginary world through a media text, but the primary methodological framework was geology, not media studies. Another example is Linde and Robra's (2017) archaeological fieldwork within the video game *Dwarf Fortress* (2006). As imaginary worlds develop greater complexity, additional real-world frameworks become applicable.

An imaginary world can be adapted into a video game or virtual world, through the process Wolf (2012) calls interactivation. In virtual form, the imaginary world gains specific properties and limitations by allowing the audience to directly interact with the world (Schut, 2007). The next section addresses the implications of interactivation by examining virtual world research.

### 2.1.2 Virtual worlds, immersion, and presence

Interactivation is the most complex form of media adaptation described by Wolf (2012), because interactivity cannot exist independently. Description, auralisation, and visualisation are pre-requisites for interactivation, and while early interactive works would not always make full use of all three of these processes, most games engage the player simultaneously with words, sounds, and visuals.

In a virtual world such as a game, objects exist not only as a piece of fiction, but also as processable data for the game engine (Aarseth, 1997; 2007a). Virtual worlds contain three separate layers, the database, engine and interface (Figure 3).

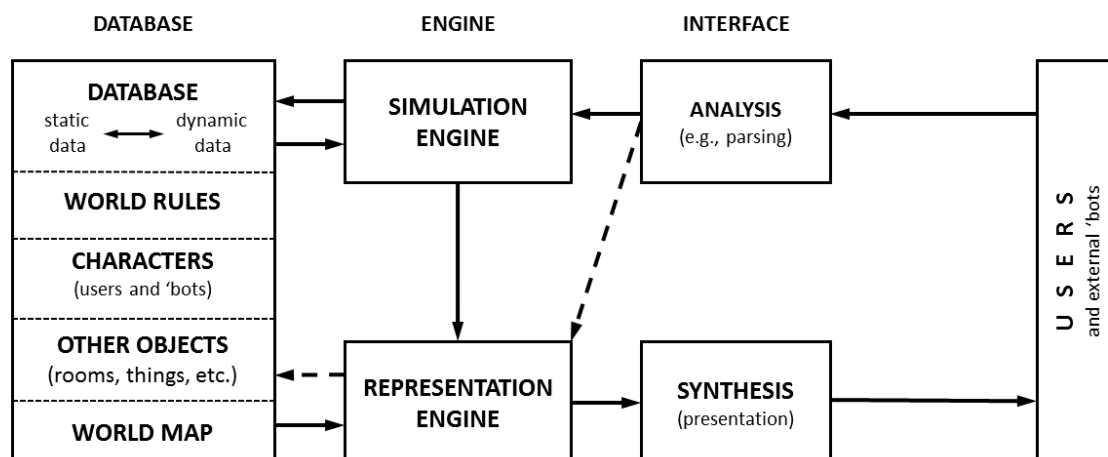


Figure 3 Layers of video game internal structure (Aarseth, 1997)

From the perspective of the player, a game or virtual world, explodes the unitary, linear experience typical to non-interactive media. By taking the role of a character inside a virtual world, the audience no longer perceives the entire text as a monolith, but rather as a world to be explored, imbued with its own internal affordances, accessible through the extra-diegetic affordances of the interface. The audience participates as players rather than spectators. They may spatially navigate through the world. The world's reactions to player and non-player actions may be simulated procedurally. Finally, the world can be bigger or more complex because of the medium's capacity to store vast amounts of data. These four properties of participation, spatiality, procedurality, and encyclopaedic capacity, identified by Murray (1997, 2012), are central to interactive media in general, but most fully realised in virtual worlds.

Building a virtual world to maximise its use of the four affordances of interactive media means progressively adding more content and complexity to the work; this process is naturally limited by the resources and capabilities of its creators. Consequently, virtual worlds are simplified compared to the real world (Juul, 2014), but also, paradoxically, to the range of actions undertaken by non-autonomous, fictional characters in other media, where content creation does not need to account for interactivity (Wolf, 2012).

To address the difficulties of implementing a large and deeply interactive world, many video games are situated in spaces where clear diegetic limits explain the player's inability to leave the confines of the game's space (Wolf, 2012). Possibly most games confine the player to a narrow, linear 'corridor' of progression (Juul, 2005) through the game world. The exceptions are open-world games, including RPGs such as *Skyrim*, and action games such as *Assassin's Creed* or the *Grand Theft Auto* (1997-2013) series. An open world affords the player relative freedom to explore a large space, and a significant range of actions to perform. An additional factor in the player's experience is the aural and visual fidelity of the world, an aspect of interactive media developed exponentially in recent decades (Ali, 2016). Because they facilitate broader and deeper exploration, open worlds demand greater development of the world-building structures described by Wolf (2012), especially the overarching structure of geography. However, they also appear to have a constraining effect on narrative structure. Most open-world games set the player in the role of a single character for the duration of the game, allowing greater identification between the player and their character or avatar (Waggoner, 2009; Gee, 2013). Consequently, the narrative is limited to a single spatial and temporal setting. This constraint limits the applicability of narrative techniques commonplace in other media (Juul, 2001; Majewski, 2003). In Wolf's (2012) terms, while a complex fabric of many stories or narrative threads can exist in the virtual world, the player can only follow one thread at any time, with other threads being paused or suspended

whenever the player abandons them. This limitation eliminates narrative braiding in the sense of multiple narratives progressing simultaneously<sup>10</sup>.

The aural and visual complexity, spatial scope, and the range and depth of interactivity and procedural simulation of the virtual world all contribute to the player's sensation of presence. Originally derived from the telecommunications concept of telepresence (Steuer, 1993), presence is frequently described through technological requirements (Bostan, 2009), but a sense of presence can exist even in literary forms (Ryan, 2001). Presence denotes the degree to which the participant experiences the virtual world as though it were a real place. Champion (2006; 2007; 2015) explores presence as the distinction between space and place, the latter being a space conveying a sense of character and purpose (Tuan, 1977). Champion distinguishes between environmental, social and cultural presence, or the sense a virtual world has the natural environmental features of a world, its characters feel like they are members of a genuine society with rules, and finally the world and its inhabitants confer a sense real cultures exist in this world, while items in the world have hermeneutic meaning. Together, these forms of presence build a sense of worldliness. This concept relates to Wolf's (2012) characterisation of imaginary world complexity, so a strong virtual world will likely also be a strong imaginary world.

Interactive media's capacity for procedural dynamism (Murray, 2012) allows virtual worlds to simulate events, providing insight into the inner functioning of a world to a level beyond non-interactive media (Schut, 2007). The player enters the system and experiences it from the inside (Gee, 2006). However, in the same way environmental, social and cultural presence are limited by the impossibility of a complete reproduction of reality, the interactive rules of the world are also partial and abstracted from reality (Juul, 2014). The procedural aspects of the game are subject to selectivity and interpretation, enabling what Bogost (2007a) calls procedural rhetoric; the choice and representation of rules in the game is not ideologically neutral, but can be used as a rhetorical method of building an argument to persuade the player to accept the creator's ideas.

Given the complexity of interactive worlds, this form of game is difficult to study (Aarseth, 2003). Champion (2007) briefly analyses *The Elder Scrolls IV: Oblivion* as a world, but his analysis is limited to a discussion of presence. Other analyses of game worlds exist (e.g. Brand, Knight, & Majewski, 2003; Brand & Knight, 2005; El-Nasr et al., 2008; Dillon, 2012; Whitaker & Glass, 2013), but are limited in depth and scope. Most studies of open-world RPGs, including *The Elder Scrolls*, concentrate on aspects other than the game world, as examined in Chapter 3. However, extensive data on these worlds has

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<sup>10</sup> An exception being large multiplayer worlds, where multiple players may follow and even create multiple stories (Wolf, 2012). Multi-character open-worlds like *Grand Theft Auto 5* (2013) also circumvent this restriction, though only to a limited degree.

already been collated outside of the scholarly context. Developers document the world as they create it, but rarely make such materials available<sup>11</sup>. In turn, players collect and discuss data on games and their worlds to realise their interest in a game as competitive players, or in its imaginary world as fans.

### 2.1.3 Fandom, participatory culture and the affinity space

Fandom denotes strong engagement with a particular object (Jenkins, 1992); these objects of affect can be media products, but can equally well be people, such as music artists or sports teams. Although fans can be engaged without being productive (Hills, 2002; Duffett, 2013), there is a strong aspect of productivity to fan culture. Fans write stories about their favourite television characters, drawing art, and subsequently, even making films, computer games, or game modifications (Jenkins, 1992, 2006; Brooker, 2002). In recent years, fan engagement has increased in depth, scale, and visibility, through what Jenkins (2006) has called participatory culture.

In a report addressing the changing nature of media education in the 21<sup>st</sup> century, Jenkins and colleagues define participatory culture as:

*“[r]elatively low barriers to artistic expression and civic engagement, strong support for creating and sharing creations, and [...] informal mentorship whereby experienced participants pass along knowledge to novices.”* (Jenkins, Purushotma, Weigel, Clinton, & Robison, 2009, p. xi)

While television fans have engaged in similar behaviours as far back as the 1970s (Jenkins, 1992; Hills, 2002), the rise of digital media and the Internet has lowered barriers to engagement, enabling participants to produce and distribute content with great ease (Jenkins, 2006). This has been a strong factor for computer game fandom.

In game studies, the concept of fans can be problematic; while Laukkanen (2005) does connect player practices to fandom, many game players whose behaviours fit the profile of engaged fans reject the label. Without denying the existence of game fans, Wirman (2007) highlights the paradox of power gamers and hardcore gamers who are intensely devoted to a game, but do not consider themselves fans. Gamers involved with the online game *World of Warcraft* (2004), have shown disinterest in the game world except where the world affects the gameplay (Wirman, 2007; Calleja, 2011).

The question of the degree to which game players are interested in the world rather than merely the game, remains important for the application of games in CH. Engagement based purely on a desire to

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<sup>11</sup> One of the ways in which developer materials about game worlds do become available is through game guides, which are written in collaboration with the developer (Hodgson, Stratton, & Cornett, 2013).

complete the game, with a lack of interest in the game world, is likely to mean a lower intake of cultural knowledge. Earlier research on virtual worlds does offer some evidence suggesting the emphasis on gameplay adversely affects players' attention to educational content (Champion, 2006). However, power gaming seems more likely to arise in multiplayer environments where competition between players exist. Thus, while the massively multiplayer online form of the RPG (MMORPG) genre has been at times held up as well-suited towards deep social and cultural presence (Champion, 2007), and MMORPGs generate social engagement (Squire, 2011), this engagement may be a 'false friend'. Given the MMORPG's innate emphasis on social interaction and competitiveness (Bartle, 2004), players who engage with the game (Wirman, 2007), or socially with other players (Poor, 2014; 2015) need not develop an interest in the game world.

The phenomenon of participatory culture has also been investigated through the concept of presumption; with computers serving as a nexus of communication, production and viewing technologies, consumers can become producer-consumer hybrids, or prosumers (Krawczyk, 2015). Ha and Yun (2011) break audiences down into four categories based on the two factors of production and consumption. These include the two productive categories of enthusiasts, or dedicated prosumers, who engage intensively in both consumption and production, and contributors, who engage intensively in production, but are far less interested in consumption; it is not a given all productive fans continuously engage in consumption. Next are spectators, who concentrate on consumption while not engaging in production. The final group are indifferent bystanders, who are characterised by low consumption and production.

The focus of this research are primarily the productive categories of enthusiasts and contributors. These categories vary in any individual across multiple media; someone who is an indifferent bystander in one medium, such as video, may be an enthusiast in another medium pertaining to the same general interest. Audience productivity varies also depending on purpose. Wirman (2007) categorises productivity into instructive and expressive categories, depending on the creator's intended objective (Figure 4).



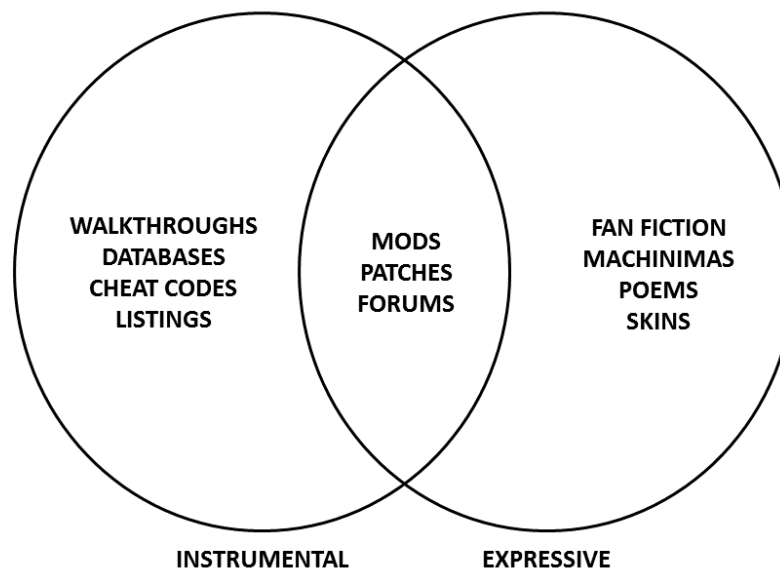


Figure 4 Types of player expression (Wirman 2007)

Game modifications (mods) fall into both categories simultaneously. Mods are combinations of art assets and/or programming code to be plugged into the game, altering its functionality and content, sometimes substantially. Probably most mods are small, changing only some aspects, or adding one or two new items, characters or story elements. So-called total conversions, however completely replace the game's content, effectively creating a new game built on top of the original (Laukkanen, 2005; Champion, 2012a). As further explored in Chapter 3, *The Elder Scrolls* games have facilitated an enormous amount of modding. Almost 30,000 mods are available for *Skyrim* through the online distribution channel Steam Workshop<sup>12</sup>, and around 55,000 more exist at Nexus Mods<sup>13</sup>; these two sites are only the two main distribution channels.

Audience productivity does not occur in a vacuum. Participatory culture depends on collaboration, and features informal systems of mentorship for transmission of knowledge (Jenkins, Purushotma, Weigel, Clinton, & Robison, 2009). Most emanations of participatory culture described by Jenkins (2006) involve a complex interplay not only between the commercial media producers and their audiences, but also between different groups or communities within the audience. These communities tend to be built around particular online or offline sites, and it is not uncommon for different communities revolving around the same property to engage in rivalry (Gee, 2013), sometimes acrimoniously.

Fan communities can be described as communities of practice, built around the three components of domain or common values and interests, practice or common tools, frameworks and activities the

<sup>12</sup> <https://steamcommunity.com/app/72850/workshop/> . Data verified as of 13/01/2018.

<sup>13</sup> <https://www.nexusmods.com/skyrim> . Data verified as of 13/01/2018.

community shares, and finally, the community itself (Fanella, 2014). However, Gee (2013) argues the features of these online communities are sufficiently distinct to use a new term, the passionate affinity space (PAS).

The PAS, as characterised by Gee, associates individuals who share a common interest regardless of their age, ethnicity, or gender, and is characterised by fluidity of movement. It is not a community, and individuals come and go freely. Social status exists in the PAS, but can be achieved in different ways. Leadership is porous. The leaders often owe their high status to cultural capital or technical skill, and are more resource than hierarchy. The PAS does not prescribe forms of participation to its members, and while some members will only consume, the PAS also facilitates production of new items or knowledge. Knowledge in the PAS is distributed among individuals, but those who hold tacit knowledge – doing – are encouraged to transform it into explicit knowledge for the benefit of others. The PAS as a site of production is transformative, so the content of the PAS changes because of user actions.

An example of a PAS can be a fan website revolving around a game, or an academic site of learning and dissemination (Squire, 2011). The potential scope of PAS knowledge practices is well illustrated with online collaborative encyclopaediae, or wikipediae. The most prominent of these, the World of Warcraft Wiki (WoWWiki)<sup>14</sup>, serves the 10 million member (Kollar, 2014) community for *World of Warcraft* (WoW). WoWWiki features 105,314 articles<sup>15</sup> and is one of the biggest English language wiki-based encyclopaediae in the world (Dybwad, 2008).

Hunter (2011) analyses the functioning of WoWWiki. He argues wiki-based websites involve a radical change in thinking, or ‘habits of mind,’ towards collaborative authorship and co-ownership of produced content. Collaboration in fan wikis can be interrupted by conflict, ranging from polite disagreement over an entry, to aggressive ‘edit wars,’ where two or more users repeatedly revert or edit each other’s changes. Conflicts may be resolved by one side either being convinced by the other’s evidence-based arguments, or being forced to back down through other means, like group voting. In extreme cases, a conflict may also be resolved by a senior user with administrative status, who may lock an entry, preventing further modification.

The example of wiki-based websites suggests Gee’s (2013) concept of the PAS as a site without formal organisation overly simplifies such sites. A communal component can exist, and leadership need not always be fluid. Some fan websites, including large-scale wikipedic sites, remain under the permanent control of their original founders, often because they are the ones who continue to cover the costs of

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<sup>14</sup> <http://wowwiki.wikia.com/>

<sup>15</sup> As of 13/01/2018.

website hosting, as is currently the case for the *Elder Scrolls* website The Unofficial Elder Scrolls Pages (UESP)<sup>16</sup>. Other sites, like Wikia, are fully commercial entities; this is also the case for the most notable mod aggregation websites, including ModDB<sup>17</sup> and Nexus Mods. Videos are shared using specialised video-sharing websites like YouTube<sup>18</sup> (Puente & Tosca, 2013). Finally, online discussion forums, which are also a site for fan productivity, are often hosted directly by the media property owners. While in most cases, the commercial owners let the community self-organise or rather remain disorganised, they do provide the basic framework, and some elements of leadership in conflict resolution. For the bulk of the community, Gee's (2013) description of porous membership and fluid leadership is accurate, but the PAS is not at its core an anarchistic concept; the technology renders anarchy impractical. Complex mods are also developed by organised teams<sup>19</sup>.

The degree of engagement of individuals in a PAS will change over time, along with their level of engagement and experience with the PAS' central object of affinity. Squire (2011) describes the possible trajectories of progression for players in relation to game-based PAS (Figure 5).

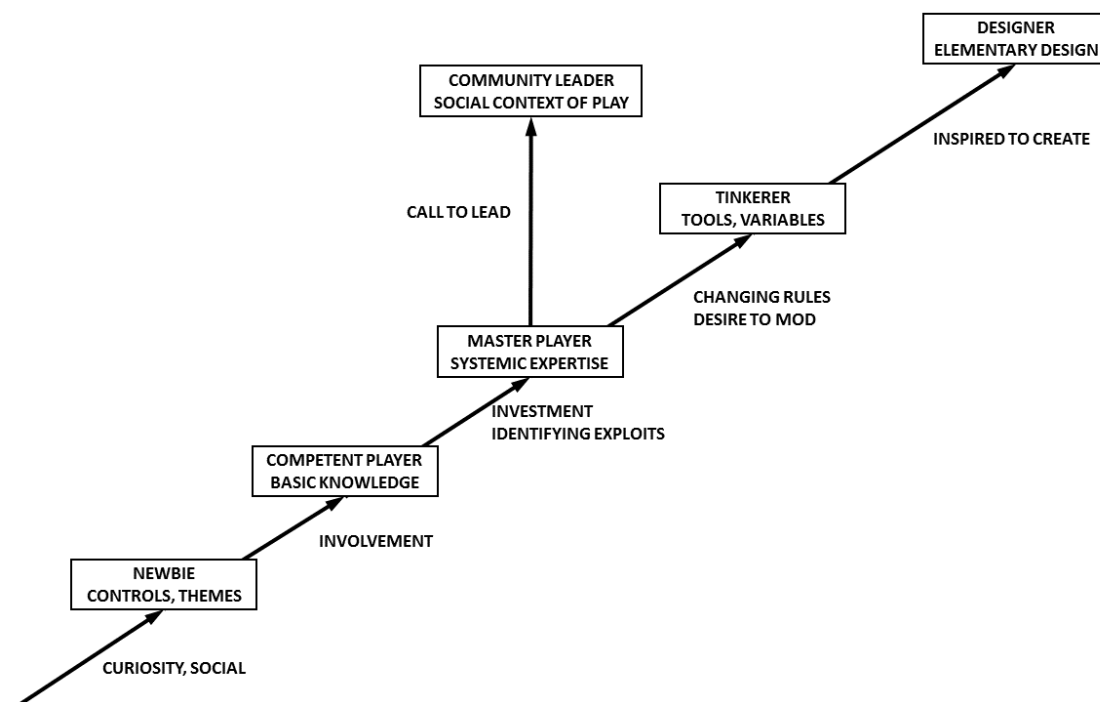


Figure 5 Trajectories of player engagement in game PAS (Squire, 2011)

<sup>16</sup> <http://en.uesp.net/>

<sup>17</sup> <http://www.moddb.com/>

<sup>18</sup> <http://www.youtube.com/>

<sup>19</sup> The author has in the past led large-scale modding projects based on the *Wing Commander* (1990-2007) property. While these projects were not as rigidly organised as a typical game industry project, the core leadership was static.

Once players master the game, if their engagement deepens, it may develop along two different trajectories, potentially simultaneously. The first is deeper social engagement, and involves the player's rise to leadership within the PAS. The second concentrates on deeper creative engagement, first experimentally, and then confidently. Although Squire problematically implies a natural path of progression toward design in particular, any form of fan creative engagement, including walkthroughs, wikis, fan art, fan films, or mods, could fit within the trajectory presented by Squire.

Game developers have a commercial interest in maintaining fan communities around their games as part of their public relations (PR) and marketing strategy. However, when PAS members reach a sufficiently high point on the creative trajectory of their engagement, the collaboration between game developers and their audience can rise to higher levels, into what Banks (2013) labels co-creation. In co-creation, there is a two-way movement of ideas and resources. All developers pay attention to player feedback, but they may also rely on player-organised wikis as knowledge repositories for their own property (Johnson, 2013).

More advanced co-creation occurs around modding, which for some developers is a means of extending product life cycles (Laukkanen, 2005; Dovey & Kennedy, 2006; Christiansen, 2012). Many developers take steps to ensure tools are available for modding communities, either by assisting modders with information for tool development, or by releasing their own internal tools. This is a feature of *The Elder Scrolls* series (Champion, 2012a), and has led to scholars noting the utility of the tools provided for virtual world research (Bostan, 2005; Fassbender, 2012); other games, such as *Neverwinter Nights* (2002) have also been extensively modded as part of research projects (Francis, 2011; Champion, 2012b; Underberg, 2012).

In rare cases, developers may allow the modders to sell their work, or negotiate with the modding team to acquire the completed mod for publication as downloadable content (DLC) for the main game. One example of an officially published mod is *Mount & Blade: Warband – Viking Conquest* (2015), based on the earlier *Brytenwalda* (2011). The game explores the culture and history of the Vikings and Britain (Savage, 2014), highlighting the potential for heritage collaborations in game-based PAS (Majewski, 2017a).

The intersection between CH and games modding, whether scholar-driven or occurring 'in the wild' in PAS communities, fits into virtual heritage, a broader engagement between heritage and games or even more broadly, digital technologies. VH provides a range of responses to the question of what roles video games and digital technologies may play in CH. Before this area may be explored further, the more general concept of heritage and heritage studies must be discussed.

## 2.2 Heritage studies

The field of heritage studies concerns itself with the preservation of objects both tangible and intangible for present and future generations (Howard, 2003). The emphasis on preservation indicates heritage is an applied discipline, which can and does produce practical outcomes. There is no narrow definition of what constitutes cultural heritage. Culture itself is a concept encompassing every aspect of human life linked to human artifice, including tangible items and intangible ideas, beliefs, and knowledge (Langness, 1987). Additionally, the concept of heritage is subjective (Smith, 2006). Howard (2003) asserts heritage is essentially everything people want to safeguard for the future as individuals or as societies, and it is often this desire to safeguard or salvage, that sets heritage apart from ruins or refuse of other kinds. In its public dimension, heritage revolves around the desire to study, preserve and interpret culture as a support framework for public identity. Numerous tools and media have been employed for heritage, from film and literature (de Groot, 2016) to digital visualisation technologies (Ch'ng, Gaffney, & Chapman, 2013) and video games (Majewski, 2015). Where media are used to convey heritage to the public, the concerns of heritage converge with the concepts of imaginary worlds and the practices of world-building (Wolf, 2012). A historical world and culture does not differ from a fictional imaginary world in the methods and practices used to depict it to an audience. It may consequently be argued the same world-building principles described by Wolf for imaginary worlds apply to cultural heritage.

Four areas of heritage studies are examined for this thesis. The different forms and evolution of cultural heritage (CH) are described, from the original focus on monumental buildings towards the recognition of many forms of tangible and intangible heritage, and the involvement of broader communities. The main strands and functions of heritage studies as a multidisciplinary and diverse field are reviewed together with the concept of heritage as a process of managing heritage in its life cycle. Subsequently, the challenges unique to indigenous CH are considered, particularly the impact of complex historical dynamics of interaction between indigenous and non-indigenous cultures. Finally, the nature of Australian Aboriginal culture is briefly summarised, though only insofar as its characteristics are relevant to research on the application of open-world RPGs for Aboriginal CH.

### 2.2.1 The forms and evolution of heritage

Early European understanding of heritage had been in the realm of physical objects like great works of monumental architecture (Smith, 2006; Vecco, 2010). Vecco (2010) describes how, as heritage evolved from a private concern to a public, national and international interest, the understanding of heritage also expanded to incorporate other areas beyond monumental architecture. Initially, heritage was limited to tangible culture, expanding into tangible natural heritage, and finally into intangible cultural

heritage. The expansion of heritage can be traced through a sequence of international treaties concerning world heritage (Figure 6).

Heritage now includes natural heritage such as fauna, flora and environments, rural heritage, historic gardens and landscapes, historic cities, costumes and traditional items; finally, a 2003 UNESCO convention expanded the concept to incorporate intangible heritage such as behaviours, customs, oral traditions, and beliefs (Vecco, 2010; Wain, 2014). Alongside the development towards acknowledging the intangible, the criteria of recognition have changed for heritage, with subjective criteria appearing alongside objective criteria (Vecco, 2010).

The shift towards the subjective stems not from the difficulty of objectively appraising intangible forms of heritage, and from a growing awareness that objective criteria for tangible heritage were themselves subjective and dependent on intangible cultural contexts (Smith, 2006). Even the value conferred on a monument due to its age is to some extent subjective (Holtorf, 2013). The idea heritage could be best objectively assessed by rational scientists emerged out of what Smith (2006) has labelled as the 'authorised heritage discourse' (AHD), with its origins in a European rationalist tradition of heritage dating back to revolutionary France outlined by Vecco (2010). Smith argues AHD privileges "*aesthetically pleasing material objects, sites, places and/or landscapes*" (2006, p. 29) over other forms of heritage, and tends to favour a top-down expert-driven discourse; experts determined what constitutes heritage and why, and how to interpret it. Holtorf (2011) argues such understandings of heritage became dominant in the 19<sup>th</sup> century because the core purpose of heritage policies at the time was to reinforce a unitary cultural identity for the emerging modern nation-state.

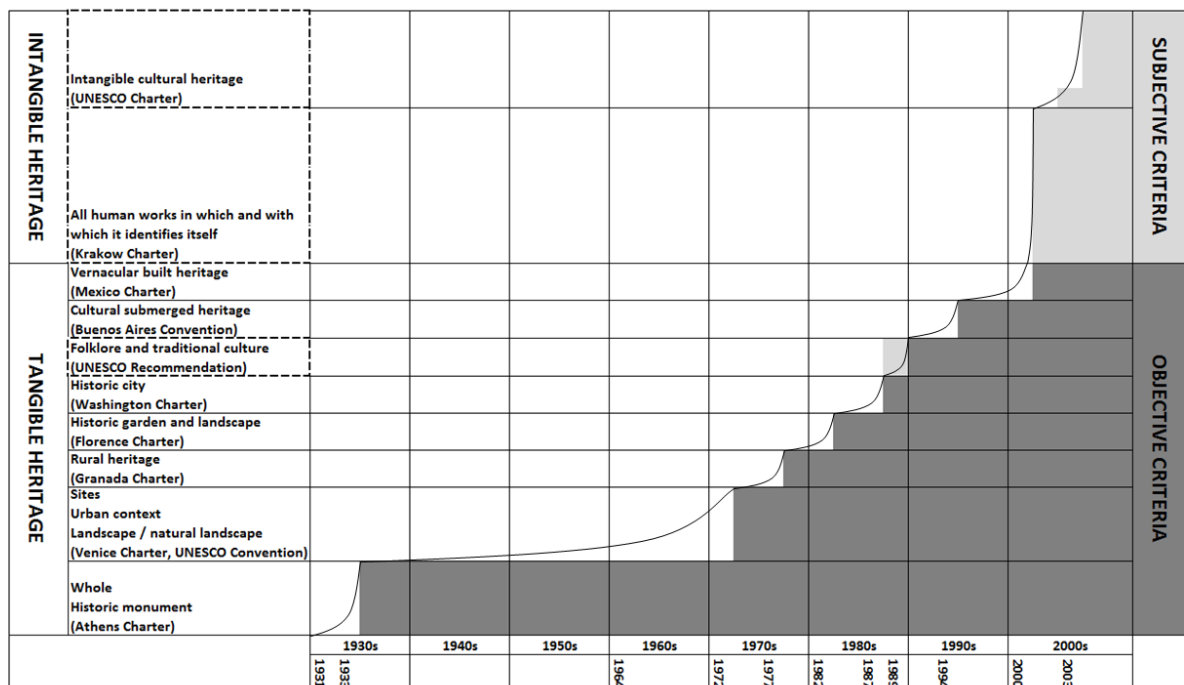


Figure 6 The evolution of the heritage concept in international charters (Vecco, 2010)

The expansion of international heritage frameworks towards intangible cultural heritage (ICH) has been propelled by a desire from non-European states for international recognition of ICH forms, especially folklore and oral storytelling, some of which were already protected legislatively by these states on a national level (Blake, 2001). Intangible heritage challenges AHD, as it is naturally dependent on community engagement (Wain, 2014). Consequently, it is not only the range of heritage interests being challenged, but also the top-down model of expert-driven heritage, as tensions between heritage management and the lively nature of local ICH traditions become apparent (Nikočević, 2012). Community involvement is now seen as the core of ICH preservation (Munjeri, 2009), a change emerging alongside the rise in interest in indigenous heritage (Blake, 2001).

Heritage studies also distinguishes between cultural and natural heritage. The former is the body of tangible and intangible cultural objects a society has inherited from earlier generations. The latter, though connected with CH (Vecco, 2010), is the environment a society inherits, including the landscape, fauna, and flora. Nature and culture are often inseparable, one influencing the other (Schama, 1996). Some rural environments exist purely through human usage, and can be lost if people cease to exploit them (Howard, 2003). The interplay between nature and culture is crucial to the understanding of indigenous CH (Munjeri, 2009), where land is central to culture (Burger, 1990).

Much of the heritage scholarship and practice remains grounded in the expert-driven tradition of the AHD (Smith, 2006) which still emphasises the tangible and monumental (Smith & Akagawa, 2009). Nonetheless, with the 2003 UNESCO Charter on ICH, and recent scholarship emphasising the

interconnectedness of tangible and intangible culture, a consensus is developing on the need to view heritage holistically (Munjeri, 2004), encompassing many natural and cultural forms and their contextual connections. This definition of heritage also signals the multidisciplinary nature of heritage studies.

### 2.2.2 Main strands and functions of heritage studies

Heritage studies encompasses many disciplines and has loosely defined boundaries (Eriksen, 2014). The multiple areas of heritage studies were explored for many years in different disciplines without any sense of a common discipline (Harrison, 2013).

Scholars have come into heritage studies from the areas of archaeology and museology (McBryde, 1985; Howard, 2003; Harrison, 2013), history and geography (Lowenthal, 1985; Schama, 1996), leisure and tourism (Staiff, Bushell, & Watson, 2013), anthropology and ethnography (Arizpe & Amescua, 2013), as well as architecture and conservation (Howard, 2003; Erikson, 2014). The areas of architecture and archaeology have spurred the incorporation of digital technologies and concepts from video games in VH. This area explores the digital reproduction of tangible heritage objects such as architecture (Tan & Rahaman, 2009), artefacts, places, the reconstruction of archaeological sites, landscapes (Ch'ng, 2007; Anderson, et al., 2009; Ch'ng, Gaffney, & Chapman, 2013), and societies (Champion, 2006; Leavy, 2014). A synergy may be observed between the quest to present and explore heritage in an increasingly holistic manner as a combination of nature and culture, the tangible and intangible (Munjeri, 2004), and the presence-based requirements of achieving worldliness (Champion, 2008).

Heritage studies serves multiple functions. Howard (2003) discusses heritage as a process within the context of organised heritage management. The process can be divided into three main stages over the lifespan of an item of heritage (Figure 7).

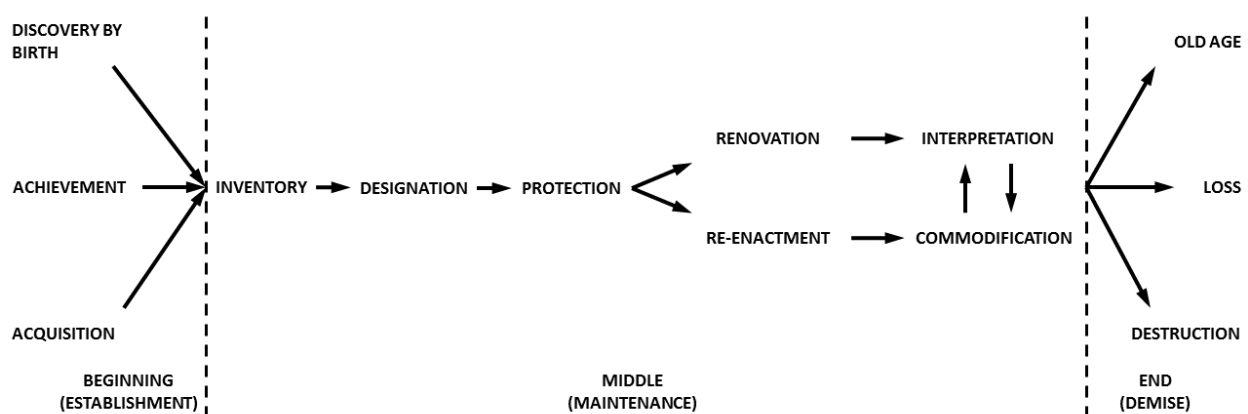


Figure 7 Stages of the heritage process (Howard, 2003)



Each stage involves different events and activities. In the beginning, an object becomes heritage, either through creation as heritage, achievement, or acquisition of heritage status; this is followed by inventorisation, designation and protection. The middle stage encompasses renovation and re-enactment, as well as an interplay between interpretation and commodification. Finally, the end stage occurs if the item of heritage is lost, destroyed, or loses relevance due to the subjective nature of heritage (Smith, 2006).

The purpose of heritage management is to keep heritage alive once it has been identified, inventorised, designated and placed under protection, avoiding heritage loss (Howard, 2003). Preservation involves renovation and/or re-enactment, with the former employing cautious repairs and conservation, while the latter being re-creation. Howard presents re-enactment as the ongoing performance of intangible heritage in the real, non-virtual world, but re-enactment can also apply to performances of intangible heritage in the virtual realm (Khan & de Byl, 2013). Once virtual methods are employed, tangible heritage opens up to a form of re-enactment through virtual reconstruction (Ch'ng, Gaffney, & Chapman, 2013; Ibrahim & Azmi, 2013). Analogously to Howard's claim of re-enactment being limited to intangible heritage, Wain (2014) argues conservation is limited to tangible heritage, while intangible heritage can only be re-enacted by those to whom it is relevant. She also notes re-enactment of intangible heritage can conflict with the preservation of tangible heritage, as the latter is often physically used for the former, risking permanent damage through wear. Nikočević (2012) in turn argues preservation can stifle living ICH.

Commodification affects heritage both positively and negatively. Commodification turns a previously unconscious continuation of intangible tradition into self-conscious re-enactment, and this may result in participants abandoning the activity (Howard, 2003). Tangible heritage may also be affected, for example when tangible objects are damaged, paradoxically, through their use in the ongoing practice of intangible heritage (Wain, 2014). Equally, Champion (2006) notes how destructive the global growth of tourism has been for sites of tangible heritage, pointing to virtual reconstruction of sites as an alternative to tourism. Arguably, commodification of intangible heritage also occurs in the publication of entertainment-oriented works of historical fiction, a process serving the popularisation of historical heritage, but criticised by professional historians for its perceived lack of accuracy (de Groot, 2016; Copplestone, 2017).

Heritage management as described by Howard (2003) concentrates on heritage entities that can be inventorised and are designated for protection, omitting what Harrison (2013) calls unofficial heritage, and generally fitting into the AHD mode of heritage. One area problematic for heritage management is indigenous heritage; its holistic nature makes it difficult to separate out individual heritage components

for designation, while past experiences have made indigenous peoples wary of heritage experts. These issues are discussed next.

### 2.2.3 The challenges of indigenous cultural heritage

The United Nations (UN) Declaration on the Rights of Indigenous Peoples (2008) does not provide any global cultural definition of indigeneity, concentrating on the need to redress past repression of indigenous groups and to safeguard their political, cultural and social rights. Other UN publications note the impossibility of establishing a formal, global definition of indigenous peoples, arguing such a definition is not necessary (United Nations Department of Economic and Social Affairs, 2009).

Indigenous communities are identified as having a common experience of being historically attached to their land, as well as being culturally distinct from, and to some degree dispossessed materially and culturally by another, dominant cultural group. Aboriginal and Torres Strait Australian societies fit this general profile of indigeneity and are referred to as such (United Nations Department of Economic and Social Affairs, 2009). Another indigenous group relevant to this research are the Native Americans (Burger, 1990).

Indigenous cultures typically live in close affinity to their environment, and transmit their traditions orally. Such cultures demand a holistic approach to heritage encompassing and prioritising intangible heritage (Marrie, 2009). Indigenous culture is always grounded in the local landscape, and cannot be understood outside of its context (Clarke, 2003). There is a reciprocal relationship between people and landscape, with the land shaping people by its affordances, while the people in turn shape the land to enhance resource availability (Sullivan, 1985; Flood, 1999; Mulvaney & Kamminga, 1999).

While all indigenous peoples have rich traditions of handcrafted tangible heritage objects which have frequently been presented in museums (Kreps, 2009), their ICH has been difficult to convey (Stanner, 1979). The evolution of the understanding of CH towards the intangible, the local, and more broadly, from heritage as an object to heritage as a practice (Smith, 2006), has partially opened the door to, and partially been informed by, a rise in interest in indigenous heritage (Blake, 2001). Accompanying the interest in indigenous heritage is research on indigenous knowledge as an epistemology distinct from traditional western knowledge (Zaman, 2013), characterised by its holistic nature and strong integration with the local environment.

However, international conventions only marginally address indigenous heritage (Marrie, 2009), and nations with indigenous populations are often unwilling to support indigenous CH efforts (Lilley, 2015). The value of indigenous heritage can be rejected in favour of the dominant society displacing them (Harrison, 2013). Alternatively, the dominant society can claim ownership of the indigenous heritage, by

classifying it as 'our common heritage' (Lilley, 2015) or arguing indigenous control will prevent ongoing research. Such claims are often accompanied with justifying arguments that a given aspect of indigenous heritage has global implications (Zimmerman, 2005; 2015).

Accumulated frustrations have left indigenous communities ill disposed towards heritage scholars (Zimmerman, 2007). Cooperation and with acknowledgement of indigenous ownership and control are needed (Creamer, 2004; Zimmerman, 2005; 2015). Furthermore, where earlier perceptions of heritage through the lens of material culture led to negative views about the value of indigenous heritage (Creamer, 2004), there is now a great appreciation for intangible heritage. This appreciation is accompanied by an awareness intangible culture cannot be preserved by heritage scholars or heritage industry workers, but rather directly by the community to which it belongs (Wain, 2014) even when preserved in a museum (Gordon, 2005; Ackley, 2009; Kreps, 2009). Questions are now being asked about the potential to improve heritage preservation and research, not only in indigenous societies, through greater community engagement and even crowdsourcing (Ridge, 2014), especially for digital language preservation (Abney & Bird, 2010).

Other structural problems also exist in the context of legal frameworks, like issues around intellectual property (IP) regulations. IP regulations arise out of European traditions, and there remains debate on their applicability to indigenous societies (Marrie, 2009), which often have radically different understandings of IP, oriented towards the community rather than the individual (Christie, 2008), and relationships rather than economic rights (Lai, 2014). There appears to be no consensus on resolving this challenge, with some states introducing additional legislation to better protect indigenous ICH, while other states instead encourage indigenous groups and individuals to use existing IP regulations (Marrie, 2009).

Improved relationships with indigenous communities are facilitated by protocols and recommendations to guide external parties in their work, establishing boundaries of what given communities will and will not permit on cultural grounds<sup>20</sup>. Such protocols exist in archaeology and anthropology (Zimmerman, 2005; Guilfoyle, Mitchell, Morgan, Coyne, & Gillies, 2013), in mining (Bradshaw, et al., 2011), and film production (Janke, 2009). In VH, cultural protocols were developed for game development in the *Digital Songlines* project (Leavy, 2014). However, no protocols are known for projects involving open collaboration in the context of an online PAS as described by Squire (2011) and Gee (2013).

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<sup>20</sup> One example of cultural issues requiring careful negotiations is the injunction in some Aboriginal communities around naming or showing deceased individuals temporarily or indefinitely. Such communities increasingly give permission for film productions to retain the footage of deceased individuals if the film is preceded by an appropriate warning (Janke, 2009).

### 2.2.4 Aboriginal cultural heritage

While the general challenges faced by indigenous cultures are applicable to Aboriginal Australia, this research requires a closer examination of specific characteristics of Aboriginal culture. Indigenous Australia consists of Aboriginal peoples and Torres Strait Islanders. Torres Strait Islanders share many cultural traits with the indigenous peoples of New Guinea, and relatively few with Aboriginal Australians (Mulvaney & Kamminga, 1999). This research concentrates on Aboriginal cultures.

Epistemological differences are a challenge for non-Aboriginal researchers or educators investigating Aboriginal culture (Perso & Hayward, 2015). These differences have been well examined by educators (e.g. Yunkaporta & McGinty, 2009; Perso & Hayward, 2015). Although Aboriginal epistemology shares similarities with other indigenous knowledge systems (cf. Zaman, 2013), Christie (2008) argues Aboriginal understanding of knowledge and knowledge practices is ultimately distinct both from European traditions, and other indigenous traditions:

- “1. Aboriginal knowledge [...] comes out of routine practices of everyday life and makes those practices possible. Sometimes particular representations of knowledge become codified in particular ways, as in art and painting [...] but normally, knowledge is embedded in [...] daily lives. It is performative. [...]”*
- 2. Aboriginal traditions differ from place to place. They derive from and enable culturally specific and context-specific practices. Australian Aboriginal knowledge is possibly different from many other Indigenous knowledge systems around the world, because language, land, and identity are interdependent in a unique way in the Australian Aboriginal world [...]. The natural environment is an embodiment of both ancestral and recent histories. The species it holds participate in making the world both intelligible and meaningful. People are only part of the knowledge system at work in the world.*
- 3. Aboriginal knowledge is owned. Laws concerning who can say what, and who can profit from particular performances, existed throughout Australia for millennia before colonization. [...]*
- 4. Aboriginal knowledge is collective. It is owned and performed by groups of people, and [...] also often (but not always) protected by a system of “managers” or “caretakers” who have rights through kinship to supervise and control the performance of particular knowledge traditions. People who share*

*it must account for their right to represent it. People who receive it must account for the use to which it is put. [...]*

*5. Aboriginal knowledge is responsive, active, and constantly renewed and reconfigured. It continues to embrace and make use of new technology. It is eco-logical. What becomes sequestered on a database or a DVD or a book is only ever already a trace of some encounter, waiting to be called on as a resource in a new knowledge production episode.”* (Christie, 2008, pp. 273-274)

Aboriginal culture revolves around relations with people and land (Watson & Chambers, 1989; Perso & Hayward, 2015). Aboriginal knowledge is informed by and embedded in the land – the Country (Guilfoyle, et al., 2013). Because of the connection to the environment, it is always local, deeply contextual and it is always concentrated on performance. Knowledge is practiced, not possessed (Christie, 2008), and learning is doing, often emphasising practical repetition (Hughes, 1987). The ownership of Aboriginal knowledge, in alignment with other indigenous cultures, is somewhat at odds with conventional IP law (Marrie, 2009), as ownership is group-based, and understood more as custodial responsibilities than usage rights (Christie, 2008).

The central position of the land as context makes digital data storage problematic, and Aboriginal elders emphasise the need for direct, physical cultural engagement with the land (People Culture Environment, 2014). However, the connection between place, landscape and people is central premise of the *Virtual Songlines* VH project and its predecessor *Digital Songlines*. Discussing the project, Leavy (2014) agrees an ordinary database cannot be used to retain Aboriginal culture without damaging it, opting instead for a reconstructed interactive landscape, where cultural knowledge would be presented in the context of appropriate relationships.

The primary contents of traditional Aboriginal knowledge also differ from western knowledge, with an emphasis on what Christie describes as practical intelligence, “*local, tacit, non-transferable, and performative*” (Christie, 2008, p. 282). The body of knowledge located in the landscape includes not only the skills needed to survive in the environment, but also the Aboriginal cosmology (Chatwin, 1987; Flood, 2006; Dean & Butler, 2013).

There are further distinctions setting Aboriginal culture apart. Watson and Chambers (1989) argue Aboriginal languages reflect a completely different way of seeing the world, with emphasis on interconnectedness, relationships, and genealogy. Another distinction, stemming perhaps from the relation-centric nature of Aboriginal culture, is the way representation of objects is understood, and how the representation relates to the represented (Pumpa, Wyeld, & Adkins, 2006). Wyeld, Crogan and

Leavy (2007) discuss the example of a virtual re-creation of Uluru, an Australian natural landmark popular with tourists, but sacred to the Anangu people. Tourists are discouraged from climbing on Uluru, and restrictions exist on photography of Uluru's north-eastern face<sup>21</sup>. These precautions were not considered in the virtual form, resulting in protests from Uluru's Traditional Owners, for whom desecration of a virtual depiction of Uluru was a desecration of Uluru itself (Haines, 2007; Wyeld, Crogan, & Leavy, 2007; Ginsburg, 2011). However, Aboriginal attitudes towards virtual re-creations are not unique, as many cultures demand special respect for the representations of sacred objects and sites. For example, when the Manchester Cathedral was depicted as a battleground in the game *Resistance: Fall of Man* (2006), the Anglican Church protested the perceived virtual desecration (Bogost, 2007b).

The nature of traditional Aboriginal knowledge also impacts learning practices. Songs and stories needed to be memorised through repetition. Traditionally, children were encouraged to learn from observing the adults, experience, and practice within a community (Flood, 2006).

The spatial, practice-oriented nature of traditional Aboriginal knowledge and education appears to match closely Gee's (2006; 2013) description of the educational features of video games. RPGs may be appropriate as explorable repositories of Aboriginal knowledge. However, access to Aboriginal knowledge practice is restricted, with traditional law defining access to sacred and secret knowledge (Flood, 2006; Dean & Butler, 2013). These restrictions are based on gender, relationships, and status of initiation. Cultural protocols demand a respect for these boundaries (Wyeld, et al. 2007; Janke, 2009; Leavy, 2014). These restrictions need to be explored further for their implications for the creation of an RPG, particularly one created with the aim of stimulating engagement through affinity spaces.

Leavy's *Virtual Songlines* project reveals how the two areas of literature reviewed in this chapter, game studies and heritage studies, converge in VH, examined in the next section.

## 2.3 Virtual heritage

At its broadest, VH is all heritage that does not exist physically, yet has the virtues afforded by existence (Halsdorfer, 2013). However, the concept has a dual meaning. In heritage studies, VH refers to the heritage of internet-based culture (Halsdorfer, 2013). By contrast, when used by scholars and practitioners exploring the application of games technology to culture, VH denotes real heritage that has been re-created virtually (e.g. Champion, 2015; Leavy, 2014; Tan & Rahaman, 2009). In this thesis, the term is only used with the latter meaning in mind.

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<sup>21</sup> The Uluru-Kata Tjuta National Park Board has recently announced climbing Uluru will be completely banned from October 2019 (Hitch & Hose, 2017).

In this section, the nature and purposes of VH are discussed with the challenges involved in the virtual representation of ICH. Next, paths of engagement between RPGs and heritage are examined, including the direct application of games for heritage via serious games, and the less direct approaches seen in the commercial game industry. Finally, the limited range of appearances of Aboriginal culture in video games so far is summarised.<sup>22</sup>

### 2.3.1 The nature and challenges of virtual heritage

VH is the construction of virtual equivalents of either material objects or immaterial performances and knowledge. It is a form of medialisisation, or the conversion into media, of heritage. Even outside of the realm of VH, the medialisisation of ICH, whether in the form of historical fiction or simply through archival recordings, is challenging. Although audio and video recordings of ICH activities can document ICH (Pietrobruno, 2013), medialisising intangible heritage is paradoxical (Lipp, 2013) because medialisisation does not directly preserve anything, instead creating a new virtual entity. Additionally, for VH, the affordances of interactive media are radically different to those of traditional media (Murray, 2012). Consequently, while VH has been presented as a compromise alternative to preservation (Ibrahim & Azmi, 2013), the virtual re-creation of an object does not in fact directly preserve the original.

Tan and Rahaman (2009) present VH as functioning in three separate domains, documentation, representation, and dissemination (Figure 8). VH can contribute to preservation through these three domains, for example when used as a learning tool for non-virtual practices (Khan & de Byl, 2013) or simply as an information archive (Christie & Verran, 2013). However, given the focus on creating a simulacrum of the original rather than direct preservation, VH more accurately match the concerns of re-enactment. There is a connection between VH and non-virtual historical re-enactments, like living history museums, costume plays and battle re-enactments (Lowenthal, 1985; Howard, 2003), as well as Renaissance fairs, and live-action RPGs (Mochocki, 2012). In his summary of heritage and history in popular media, de Groot (2016) catalogues video games alongside living museums and re-enactments as ways to perform and play history. Consequently, while VH is connected to all the forms of historical fiction catalogued by de Groot by shared subject matter and the basic concept of medialisising heritage, the connection between VH and re-enactment is deeper and based on the capacity for participation.

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<sup>22</sup> These three sections have also been described in separate publications by the author: the virtual representation of ICH (Majewski, in press), paths of engagement between RPGs and heritage (Majewski, 2015), Aboriginal culture in video games (Majewski, 2016). However, all relevant information from these publications is incorporated here.

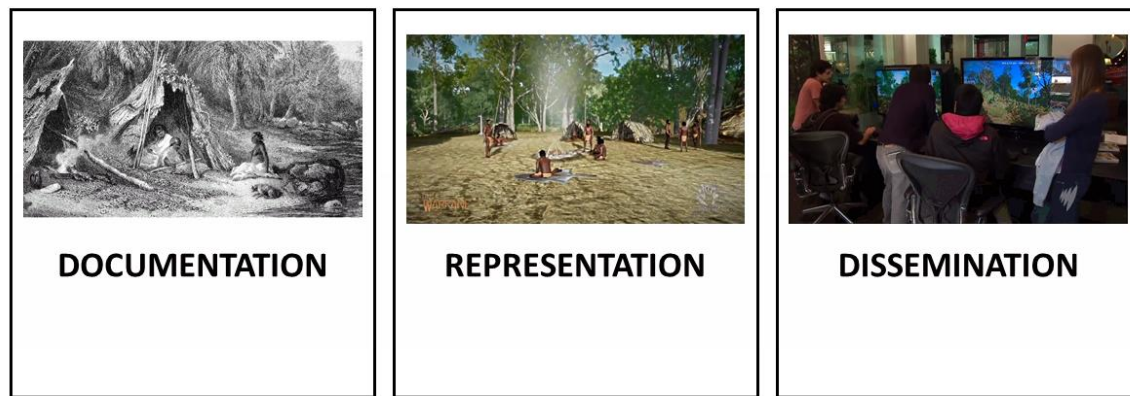


Figure 8 The domains of virtual heritage using the example of Virtual Warrane II (adapted from Tan & Rahaman, 2009; images: Booth, 1979; Immersive Heritage, 2012; WorldNewsAustralia, 2012)

The connection between historical re-enactment and VH lies not only in shared characteristics, but also a cross-pollination of ideas and individuals whose involvement stretches from re-enactments to video games; Developers of medieval-themed RPGs, as well as games and heritage researchers, can be personally involved in Renaissance fairs (King & Borland, 2003) or live-action RPGs (Mochocki, 2012). In this way, VH connects with historical fiction, which provides audiences with opportunities to experience culture and nature through various media (de Groot, 2016).

Non-virtual forms of re-enactment of intangible heritage and reconstruction of material heritage carry significant benefits. They may assist in the interpretation or explication of a site to the audience (Howard, 2003), popularise heritage, and provide support for the development of popular media productions (de Groot, 2016). They may even be used for the purposes of academic research. For example, experimental archaeology may re-create an object based on what is known about the remnants of the original, to challenge and verify theories about the original object (Stróżyk, 2010). Re-enactors may also gain an understanding of the re-enacted activity beyond literature; for instance, to not only see a diagram of a potter's wheel, but to use it. The more general argument presented in favour of historical fiction or films also applies: the process of creating such works demands an examination of details that do not play a large role in accounts of historical events (Mortimer, 2011), and should be seen as another way of pursuing history (de Groot, 2016).

The benefits of non-virtual re-enactments carry across to VH. When a virtual experience makes full use of the participatory and procedural affordances of interactive media, it becomes a form of procedural re-enactment (Majewski, in press), empowering the user to interact with the simulated heritage content. Beyond description and visualisation, VH encompasses simulation. While simulation, emerging from the procedural affordances of all interactive media (Murray, 2012) may be used outside of games,



as in the case of Ch'ng's (2007) application of video game technology to create a reconstruction of a prehistoric landscape, it is especially useful in video games (Gee, 2006; 2013; Champion, 2006; 2007; Schut, 2007). This is the case for serious games, which prioritise non-entertainment utility (Sawyer, 2010), while aiming to be fun to engage the user with the educational content (Egenfeldt-Nielsen, 2005). Such games are used for many applications ranging from health and work to education, training, documentation (Sawyer & Smith, 2008; Egenfeldt-Nielsen, Meyer, & Sørensen, 2011), and culture (Mortara, et al., 2014).

A chronologically extreme case of the value of virtual visualisations can be found in the discourse around the film documentary series *Walking with Dinosaurs* (1999); although not interactive, the re-creation of virtual models and animations of dinosaurs led to revisions of earlier theories about the motion of particular dinosaurs, as these were impossible to implement in simulation. However, *Walking with Dinosaurs* also faced criticism from the scientific community precisely because the virtual reconstruction was vivid and visually realistic, potentially deceiving audiences to accept speculation as fact (Giddings, 2015). When creating a digital model for film, or when determining the content of a game, designers will typically choose one option, where available data may have facilitated multiple interpretations, thus conveying a false sense of certainty (Champion, 2006). When dealing with speculative topics, VH can paradoxically be too persuasive; for VH, also because the rules within a procedural re-enactment will convey, intentionally or otherwise, the procedural rhetoric described by Bogost (2007a).

VH can also suffer from a lack of authenticity. If authenticity was problematic for non-virtual re-enactments (Howard, 2003), it becomes unattainable for VH. As simulacra, virtual re-creations are not 'real', and not materially authentic, even to the limited extent sound and image recordings can represent heritage in a materially authentic way. Material authenticity has been an important indicator of heritage value (Smith, 2006). However, the nature of authenticity and especially material authenticity is currently a subject of debate, because perceptions of authenticity can depend on subjective understandings of what authenticity should be like. As Holtorf (2013) notes, a materially authentic object, such as a building, may feel inauthentic because recent modifications have excised the patina of age. By contrast, a materially inauthentic replica may feel authentic, even when the replica is contrary to verifiable historical facts, provided it fits the audience expectations of what the authentic object should be like. This leads Holtorf to suggest the notion of 'pastness', the subjective age-value of heritage objects, which may run contrary to the material age. If pastness as a subjective feeling is taken as a measure of authenticity instead of objective standards of material authenticity, then VH can also feel

authentic for the audience<sup>23</sup> to a point. This authenticity will be virtual, different to material re-creations, in the same way as games only offer virtual, not physical, tangibility (Schut, 2016).

The desire to feel authentic also raises the issue of emotional authenticity. As summarised by Smith and Campbell (2015), the role played by emotions in heritage is hotly debated, and appealing to emotions is often seen as an objectionable ‘Disneyfication’ of heritage, which may get in the way of the educational role of the museum or heritage site (Stróżyk, 2010; Smith & Campbell, 2015). By contrast, video games appeal to emotions; game designers want to emotionally affect players (Freeman, 2004). However, affect plays a role in the heritage experience (Smith & Campbell, 2015), and education scholars like Gee (2006) have also argued the capacity to arouse empathy is one reason video games are powerful learning tools.

Heritage-oriented simulation does not have a strong track record. Tan and Rahaman (2009) report a lack of meaningful and cultural content, engagement and sense of place in VH. They also argue VH tends to be static and unchanging, indicating a divergence between the potential of simulation described by game scholars (Schut, 2007; Squire, 2011; Gee, 2013) and its current implementation in VH.

Champion (2006; 2015) examines the challenges of VH, and argues the importance of establishing a sense of environmental, social and cultural presence. He also examines (2007) presence in role-playing games with the example of *Oblivion*. While Champion ultimately concludes *Oblivion* fails in cultural terms, and in a later work (2015) also argues *Skyrim* fails similarly, he found serious VH applications even more lacking (Champion, 2006). Researchers exploring avenues of progression for VH often point to commercial video games as a source of inspiration. Granström (2013) conducted a meta-analysis of 18 VH papers, which she used to construct a matrix of 17 game elements (Table 1) identified as most useful for CH by scholars.

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<sup>23</sup> Feeling also shows up in game industry discussions of authenticity. In the author’s own experience of presenting games to journalists, and the discussions with marketing departments preceding such presentations, authenticity was invoked to signal the game was *not* accurate. Authenticity meant the game is intended to *feel* accurate without *being* accurate. Feelings are subjective, so this understanding of authenticity means appealing to audience experiences. The implications of this fact become clear when the example of war and combat is considered. Few people have experienced war firsthand, but most have seen fictional war in film. The fiction film thus becomes the audience’s point of reference for whether a game’s combat experience feels authentic or not. There is a large divergence between how game developers and heritage scholars understand authenticity, a point explored by Copplestone (2017). The sacrifice of accuracy to pander to audiences is also noted by Johnson (2013) and Softysiak (2015).

Category	Element	Description
Interactivity	Interactivity	Ability to affect, use or communicate.
Interactivity	Exploration	Openly navigable environment.
Interactivity	Tasks	Assignments, errands, missions, quests, challenges.
Interactivity	Dialogue	Communication/ Conversation between player and non-player character.
Interactivity	Quiz	Test with questions.
Depth of Meaning	Culture and history	Intangible heritage. Cultural expressions, rituals, traditions, customs, skills, beliefs, values. Historical events and developments.
Depth of Meaning	Story	Plot/Narrative.
Characters	Roleplay	The player assuming the role of the player character.
Characters	Avatar	Visual representation of the player character.
Characters	Personalized avatar	Possibility to alter the appearance of the player character.
Characters	Other characters	Real or virtual characters/actors.
Characters	Multiplayer	Ability to play with other players in the same environment.
Accuracy & realism	Cultural & historical	Cultural and historical correctness.
Accuracy & realism	Visual & behavioural	3D models, textures, shaders. Animation, artificial intelligence, crowd simulation, physics.
Accuracy & realism	Environmental	Weather, day and night cycle, wildlife, vegetation.
Accuracy & realism	Auditory	Sound.
Accuracy & realism	Olfactory	Smell.

Table 1 A matrix of 17 game elements useful for cultural heritage (based on Granström, 2013)

Granström matched up the identified elements to four popular video games (Table 2) including *Skyrim*, *Mass Effect* (2007), *Assassin's Creed II* (2009), and *Red Dead Redemption* (2010). *Skyrim* came closest to incorporating all the elements from the matrix, with 13 out of 17 elements fully incorporated.

Category	Element	<i>Skyrim</i>	<i>Mass Effect</i>	<i>Assassin's Creed II</i>	<i>Red Dead Redemption</i>
Interactivity	Interactivity	Yes	Yes	Yes	Yes
Interactivity	Exploration	Yes	Yes	Yes	Yes
Interactivity	Tasks	Yes	Yes	Yes	Yes
Interactivity	Dialogue	Yes	Yes	Partial	Partial
Interactivity	Quiz	No	No	No	No
Depth of Meaning	Culture and history	Yes	Partial	Partial	Yes
Depth of Meaning	Story	Yes	Yes	Yes	Yes
Characters	Roleplay	Yes	Yes	Yes	Yes
Characters	Avatar	Yes	Yes	Yes	Yes
Characters	Personalized avatar	Yes	Yes	No	No
Characters	Other characters	Yes	Yes	Yes	Yes
Characters	Multiplayer	No	No	No	Yes
Accuracy & realism	Cultural & historical	No	No	Partial	Partial
Accuracy & realism	Visual & behavioural	Yes	Yes	Yes	Yes
Accuracy & realism	Environmental	Yes	Partial	Partial	Yes
Accuracy & realism	Auditory	Yes	Yes	Yes	Yes
Accuracy & realism	Olfactory	No	No	No	No

Table 2 Elements useful for heritage in four games analysed by Granström (based on Granström, 2013)

Granström argues VH scholars should be drawing inspiration from commercial games, while simultaneously acknowledging the difficulty of doing so, given the divergence in budgets between serious game projects and commercial video games. However, Granström's project concentrated on the meta-analytical examination of literature, with relatively little attention devoted to interrogating the identified elements or exploring the tools and methods games use to implement them. The individual elements in Granström's matrix are broad, and not defined in measurable terms, making this categorisation difficult to apply in practice.

Granström's and Champion's (2006) research indicates serious VH games can learn from commercial games. Simultaneously, scholars note the tendency towards violence in commercial games (e.g. Crogan, 2011, Champion, 2015). Direct adaptation of commercial practices raises the "Indiana Jones dilemma" (Champion, 2015) referring to the film series that popularised archaeology, but placed it in a violent context seeming to idealise vandalism. There are, however, other avenues of engagement between heritage and games, where commercial methods are adopted indirectly. The next section considers these avenues.

### 2.3.2 Approaches to heritage in RPG video games

Many video games engage with heritage content to some degree. The strength of engagement depends heavily on the creators' intentions (Koch, 2013; Majewski, 2015). The extreme ends of the spectrum are culture-oriented serious games, where games technology is harnessed for the propagation of heritage, and commercial games where heritage is harnessed for other purposes, like inspiration for world-building.

In Majewski (2015), the author argued four broad categories of RPG and RPG-like games can be identified depending on their relationship with culture (Figure 9). For serious games, propagating heritage is the objective. For most commercial games, CH is used only for world-building. The remaining two categories are hybrid and dependent on commercial or serious games. Culture-centric titles are those commercial games designed to explore CH, or serious games designed to imitate commercial game practices. Finally, game mods are player-produced content for existing games, contextualised by the target game, and are driven by the interests of the game's community.<sup>24</sup>

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<sup>24</sup> The reader is referred to Appendix H for an extensive selection of culture-oriented games within these categories.

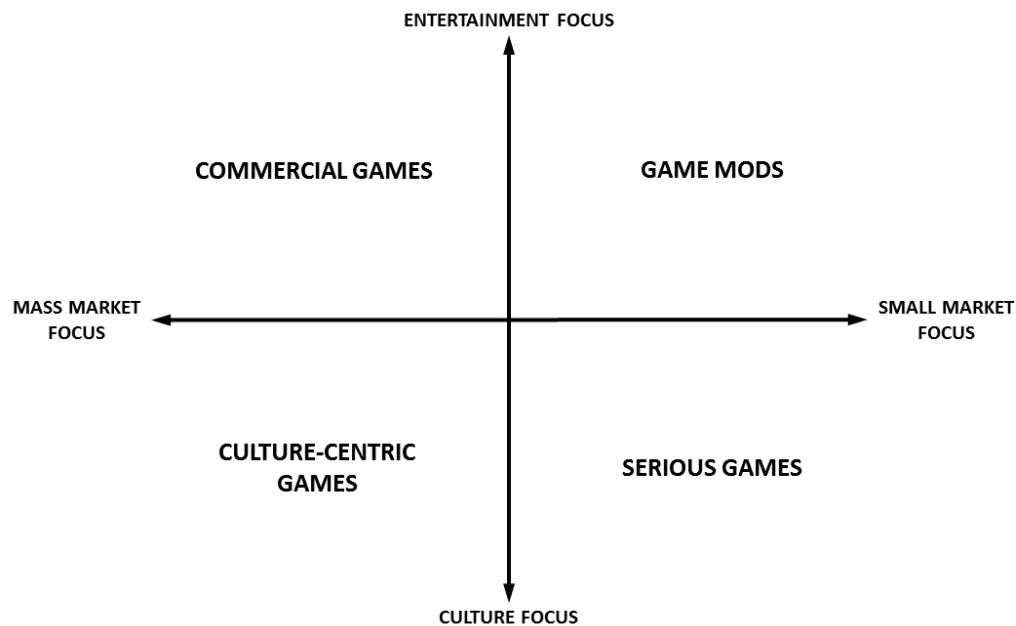


Figure 9 Categories of games in relation to culture and market focus (Majewski, 2015)

In serious games, there is an extensive tradition of culture-oriented productions (Anderson, et al., 2009; Mortara, et al., 2014). In projects of this type, creating an engaging game is a lower priority compared to preparing a suitable way to access cultural and natural heritage content through a virtual world (Leavy, 2014). Mortara and colleagues (2014) distinguish three categories of cultural serious games. Cultural awareness games like *Tactical Iraqi* (2003) or *RezWorld* (unpublished) teach about culture or language. Historical reconstruction games re-create historical periods or events, like *Revolution* (Francis, 2011). Finally, heritage awareness games like *Roma Nova* (2010), a virtual reconstruction of Ancient Rome (Serious Games Institute UK, 2010), re-create places to showcase their heritage value. The *Virtual Songlines*-based projects like *Virtual Warrane II* (Pandya, 2012) or the subsequent *Virtual Meanjin* (Purtill, 2016), as virtual worlds, transcend these categories, depicting at once culture, historical period, and heritage places.

*The Elder Scrolls V: Skyrim* is an example of a commercial game employing real heritage for world-building. *Skyrim* is built on a layer of Scandinavian culture (Johnson, 2013; Daun, 2014), filtered through the lens of popular culture and fantasy (Softysiak, 2015). Another example is *Assassin's Creed* (AC). While the series is a science-fiction/fantasy story, it is ostensibly set in the real world, with each game in the series exploring a different spatial and temporal setting. AC devotes significant attention to the cultural backdrop (El-Nasr, Al-Saati, Niedenthal, & Milam, 2008; Granström, 2013). While accuracy is still sacrificed for the sake of the story, Whitaker and colleagues argue for the series' value as an introduction to culture and history (Whitaker & Glass 2013; Whitaker & Luther 2014; Whitaker &

Andress 2015). As an action game, *AC* does not empower deep exploration, with interaction ultimately limited to the narrow range of actions required to perform a series of assassinations. Interestingly, the developers have announced an upcoming combat-free educational mode for the recent *Assassin's Creed Origins* (2017) set in Ancient Egypt (McAloon, 2017). It is impossible to assess this new mode before its release, but its development shows how commercial games can veer towards culture.

Culture-centric games are commercial titles or serious games designed to imitate commercial titles that either explicitly explore heritage, or rely on heritage as a draw factor to such an extent, this becomes their most notable feature. Titles of this kind include *World of Temasek* (2010), and *Mount & Blade: With Fire and Sword* (2011). The latter has been examined elsewhere as having serious deficiencies in the CH aspect (Majewski, 2014; Mochocki, 2017). In turn, *World of Temasek* (*WoT*) is an MMORPG depicting 14<sup>th</sup> century Singapore. The game was funded by the National Heritage Board of Singapore (Lim, 2012) and developed in cooperation with academics (Wu & Jones, 2010) both for general audiences and for use in classrooms. *WoT* incorporates quests and dialogues for heritage purposes, but its cultural depth remained limited, while its commercially-inspired form failed to capture an audience outside of the classroom, indicative of the inherent tension between cultural themes and mass appeal. A more successful example of a culture-centric game is *Never Alone* (Image 3), a game exploring the Iñupiaq culture indigenous to Alaska, and fully funded by a local indigenous NGO, the Cook Inlet Tribal Council (Roberts, 2015). The game generated solid sales and publicity (Cook Inlet Tribal Council, 2017), but also showed the limits of the culture-centric approach within the constraints of a heritage budgets, as its game mechanics (Image 4) suggest *Never Alone* was curtailed for a small budget. These constraints have prevented the game from exploring Iñupiaq culture at the deeper level of procedural rhetoric (Bogost, 2007a), where cultural content could be conveyed not only through video cutscenes and the visual design, but also through the rules and mechanics of the game (Majewski, 2017c).



Image 3 Iñupiaq storytelling in *Never Alone*



Image 4 Non-culture-specific gameplay in *Never Alone*

Player-developed mods as a category tend to be awkward in exploring CH, constrained by a lack of funding and the need to fit within the framework of a particular game. Some mods are academic-driven serious game projects (Champion, 2012b), as in the case of *Revolution* (Francis, 2011) where *Neverwinter Nights* was modded into a depiction of 18<sup>th</sup> century colonial America, or Underberg's (2012) *Turkey Maiden Educational Computer Game* used to convey a Spanish folk tale. Most mods, however, are developed by audiences outside of CH circles. The existence of culture-oriented mods is indicative of culture-oriented game PAS. Mods are produced cooperatively, giving many players opportunities to contribute to ongoing development. The mod *Suvarnabhumi Mahayuth* (2012) for the game *Mount & Blade: Warband* (2010) can be contrasted with the previously described *WoT*. *Suvarnabhumi Mahayuth* (*SM*), like *WoT*, deals with the cultural and historical heritage of South-East Asia, though encompassing the entire area rather than just Singapore. Local cultures are depicted with their own architecture, troop types, and clothing. However, architecture is only partially modified in appearance from the original *Warband*, showing the limits of small fan productions. Nonetheless, *SM* owes its existence to far greater player engagement than is observable in *World of Temasek*.

In spite of their limitations, mods like *SM* demonstrate the possible achievements of players working in PAS contexts (Majewski, 2017a), as do the numerous *Skyrim* mods. However, while the culturally-focussed output from *Mount & Blade* modders implies players engaging to explore and develop cultural content, it is not known if this is the case in *Skyrim* and the rest of the *Elder Scrolls* series.

### 2.3.3 Aboriginal culture in video games

The final area of consideration for VH is the range of previous depictions of Aboriginal culture in video games. While *Virtual Songlines* is prominent among Australian serious games, Aboriginal culture is rare in commercial games, with most examples being the simplified depictions in strategy games and their mods (Majewski, 2016), both beyond the scope of this research.

The only video games to offer any depth in their depiction of Aboriginal culture are the serious games and virtual worlds created by Aboriginal Australian Brett Leavy and his teams in the *Digital/Virtual Songlines* projects<sup>25</sup>. These include the projects described in Leavy (2014), as well as *Virtual Warrane* (2007) and *Virtual Warrane II* (2012). Leavy has subsequently spearheaded *Virtual Meanjin* depicting the Brisbane area in times prior to European contact (Purtill, 2016), and his YouTube channel<sup>26</sup> showcases additional projects in development for various areas of Australia, primarily concentrated around state capitals. There are other examples of Aboriginal Australians developing games and interactive media invoking Aboriginal culture (Matheson, 2015), but Leavy's projects are the most extensive in scope. Though these projects are not typically available to the public, *Virtual Songlines* has been reported to generate strong positive reactions from its Aboriginal audiences, encouraging them to engage more deeply with their heritage (Funnell, 2015).

One other non-commercial video game project related to Aboriginal culture exists. *Songlines* (2012) was developed as a student project (Vick, 2012). *Songlines* is a surreal fantasy game that draws inspiration from Aboriginal creation stories. The game shows realist works are not the only option available in heritage: creation stories, myths, and legends are also a part of the Aboriginal CH.

In late 2015, another game featuring Aboriginal Australians appeared and soon disappeared. Developed by a small team from Russia, the mobile game *Survival Island 3: Australia* (2015) generated extreme controversy, as the player, taking the role of a non-Aboriginal character, can kill Aboriginal people within the game. Aboriginal culture does not appear to have been explored in any meaningful way, and while it is possible for the player to engage with Aboriginal people on friendly terms as well, the game's marketing materials implied the necessity of fighting Aboriginal characters (Gooch, 2016). The game triggered an online petition demanding its removal. This petition and the ensuing media backlash prompted the game's online distributors to drop the game (Usher, 2016).

Games like *Survival Island 3* have the potential, in the long term, to generate mistrust in Aboriginal communities regarding video games as an avenue for heritage. However, they can also motivate the

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<sup>25</sup> <https://www.virtualsonglines.org/>

<sup>26</sup> <https://www.youtube.com/channel/UC0IEXhkc9hVhaikd4aSIEIQ>



search for better ways to develop appropriately-themed games. This appears to have been one result of the outcry over *Survival Island 3*, with the New South Wales Aboriginal Land Council chairman Roy Ah-See condemning *Survival Island 3*, but noting the educational potential inherent in video games, and urging game developers to collaborate with Indigenous communities and developers (Johnston, 2016).

## 2.4 Conclusion

This chapter has analysed the academic literature around game studies, CH, and their convergence in VH. Many questions have been raised concerning RPG games, affinity spaces, and optimal avenues for exploration of indigenous heritage through video games. However, the presented information does not yet conclude the literature review. Given the central role of *The Elder Scrolls* in this study, there is a need to examine the history and research around *TES* and more broadly, the RPG genre. The history and present state of *TES* PAS also needs to be examined. These topics are examined in Chapter 3.

# Chapter 3: Literature review: the open-world RPG and *The Elder Scrolls*

### 3 Literature review: the open-world RPG and *The Elder Scrolls*

Chapter 2 presented a multidisciplinary review of academic literature around video games and heritage. In both cases, *The Elder Scrolls V: Skyrim* (2011) emerged as a significant object for investigation. The game is a sophisticated virtual world, and has been identified as an exemplar of the affordances game-based virtual worlds can provide for CH (Granström, 2013).

The present chapter continues the literature review, concentrating on the *TES* series. The chapter begins with a brief discussion of the broad history of the RPG genre. Subsequently, *TES* is summarised as a franchise, followed by a review of academic discourse around *TES*. Finally, the history of the *TES* series and its player communities is examined as a backdrop for the present study of *Skyrim* and its audience.

#### 3.1 Historical overview of the open-world RPG

*The Elder Scrolls* is rooted through a continuity of gameplay rules and fantasy tropes in a longer, double tradition of role-playing games: of digital RPGs dating back to 1979 (Barton, 2008), and non-digital RPGs dating back to at least 1971 (Tresca, 2011). This history is summarised here. Unfortunately, as a field, game history remains underexplored; sources are few, and constrained to chronicle-like, descriptive works (Lowood & Guins, 2016). While there are many works examining various aspects of the RPG genre (e.g. Harrigan & Wardrip-Fruin, 2007; Hitchens & Drachen, 2008; Voorhees, Call, & Whitlock, 2012; MacCallum-Stewart, 2016), and even an *International Journal of Role-Playing*<sup>27</sup>, there are only two main sources of RPG history, Barton's (2008) chronicle of the cRPG, and Tresca's (2011) broader history of the RPG across its various digital and non-digital forms, which relies on Barton when describing cRPGs. This dearth of sources prevents deeper interrogation, but existing data is sufficient to contextualise *TES*.

##### 3.1.1 Tabletop or pen & paper RPGs

Non-digital RPGs emerged from a combination of tabletop wargaming with inspirations from fantasy literature, especially J.R.R. Tolkien (Barton, 2008). The early non-digital, pen-and-paper (Hitchens & Drachen, 2008) or tabletop RPGs were played using printed game manuals, dice, paper and pencils. Players sat around a table, using paper character sheets to track their characters' progress, while dice throws determined the outcomes of their actions in accordance with published rulebooks like Gary Gygax' *Dungeons & Dragons* (1974). One player, designated the dungeon master (DM), took the double role of the storyteller and adversary for the others. The DM was the equivalent of the video game designer combined with the video game itself; DMs would design the game setting, determine the cast of non-player characters (NPCs) the players would run into, and then during the game, they role-played

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<sup>27</sup> <http://ijrp.subcultures.nl/>

the NPCs, rolled their dice, and told the players at every opportunity how the world reacts to their actions (Tresca, 2011). The players, in turn, had the double role of players, trying to successfully overcome whatever circumstances they encountered, and actors in the literal sense, roleplaying their interactions with one another and with NPCs.

The genre originated with the fantasy-themed *Dungeons & Dragons* (*D&D*) (MacCallum-Stewart, 2016) and its 1977 re-edition, *Advanced Dungeons & Dragons* (*AD&D*). *D&D* provided players with a set of play manuals and a body of paratexts providing examples of fantasy creatures, locations, and even pre-designed story or campaign modules to aid the DM's world-building. *D&D* was fundamentally an open-world RPG and a game of emergence in Juul's (2005) phraseology; players could go beyond pre-designed content within the constraints of what the DM could improvise on the spot (Tresca, 2011). This ability to improvise, as the designers of *The Elder Scrolls* would later note (Majewski, 2017b), gave tabletop RPG players freedom to dynamically explore new narratives and to undertake a diverse range of activities.

*D&D* was the most influential of early tabletop RPGs (Hitchens & Drachen, 2008). Many early cRPGs were derivative of *D&D* or *AD&D* (Barton, 2008). Few, however, could imitate the freedom *D&D* and other tabletop games afforded to players.

### 3.1.2 The evolution of the computer RPG

cRPG scholar Matt Barton (2008) divides the history of the cRPG into five uneven eras: the dark age (1974-1979), bronze (1979-1983), silver (1983-1985), golden (1985-1996), platinum (1996-2001), and finally, the modern age (2001-onwards). The primary scope of this thesis will be RPGs from the late golden era onwards (1994-onwards), but to provide clarity a short overview on the genre evolution is presented.

Early cRPGs lacked many of the features characterising tabletop RPGs (Barton, 2008). There was little opportunity for players to roleplay their characters, and the DM was replaced by the game. Limited storage and processing power in early computers (Pepe, 2017) meant early cRPGs were stripped bare of most RPG mechanics, limited to a narrow range of combat-driven activities. In the early cRPGs, combat remained relatively unchanged from the tabletop, except all the dice rolls and statistical calculations were taken over by the computer. These works could be described as incunabula, cradle works (Murray, 1997), making use of immature conventions imported from earlier media, and taking limited advantage of the affordances of the interactive media.

The core of the early cRPG was the quest (Howard, 2008) and the dungeon (Barton, 2008); the former providing narrative context, the latter a space for the narrative to play out. The quest, a concept evocative of meaningful religious journeys (Bainbridge, 2013), is often used in literature and in film in

the form of the hero's journey (Vogler, 1999), the quest is a mission sending the hero on a spatial journey, ending with the double resolution of overcoming the hero's inner character flaws, and restoring balance to the world at large by resolving some external problem (Howard, 2008). In the cRPG, the external problem was typically the evil dragon, knight, wizard, or other similar adversary at the bottom of the final dungeon (Barton, 2008), while the player character's internal problem was only the need to improve combat capacity sufficiently to overcome the final enemy. The dungeon is a labyrinthine, often multi-level structure where dangerous adversaries intermingled with beneficial items, or loot, for the player to pick up. Dating back to early tabletop RPGs (Barton, 2008), the cRPG dungeon encouraged exploration by offering occasional rewards in dead-end branches, in the form of sub-quests or additional items to pick up.

Two branches of cRPGs, dungeon crawlers and open-world RPGs can be distinguished, based on the degree of world exploration the developers offered to the player (Barton, 2008). The former developed a first-person three-dimensional (3D) perspective, and moved the genre away from tabletop-derived game mechanics by shifting the gameplay from a turn-based intellectual model to a real-time action model. The latter, characterised by a two-dimensional (2D), top-down perspective, experimented with world-building conventions, providing players with a larger world map connecting multiple dungeons, as well as other locations such as castles and cities where friendly NPCs could be encountered.

The *Ultima* series (1981-2013), and especially *Ultima VI: The False Prophet* (1990), encapsulate the trend towards open worlds and, by extension, the pursuit of the digital medium's core affordances of encyclopaedic capacity and spatiality (Murray, 2012). The series initially used a zoomed-out 2D map to allow the player to navigate between dungeons presented in a simple 3D first-person perspective, but it also developed increasingly sophisticated non-dungeon settings presented from a close-up top-down view; the game depicted cities populated by friendly NPCs and a variety of commercial services from shops to taverns. Finally, *Ultima VI* abandoned both the first-person dungeons and the zoomed-out map view in favour of a consistent close-up top-down view with a unified interface (King & Borland, 2003). Simplifying the game to just one, 2D mode of view in turn allowed the developers to implement more complex world interaction mechanics, where players could now pick up and use many items unrelated to combat, including seemingly trivial household items such as cups, plates, or candelabras. The subsequent spin-off *Ultima* game, *Worlds of Ultima: The Savage Empire* (1990) also incorporated possibilities of 'crafting', a term now commonly used to denote gameplay activities where players combine resources or items to create more complex items (Redmond, 2014).

*Ultima VI* also introduced short diegetic books and scrolls which could be read by the player to convey lore about the game world. The *Ultima* games pioneered the use of diegetic paratexts or feelies

(Loguidice, 2004). Each game was accompanied by a printed map, and most games were accompanied not only by a game manual, but also by one or more illustrated booklets presented as diegetic objects. At this point, the *Ultima* series also included relatively complex NPCs, with whom the player could converse to a limited degree by typing in keywords, and *Ultima VI* further expanded this aspect of the game by implementing new NPC roles such as bakers and tailors who were intended to contribute to world-building rather than gameplay (Barton, 2008). The incorporation of these numerous carriers of knowledge, combined with text-based NPC dialogues and narratives eschewing the 'kill-the-big-bad' plots characteristic of early cRPGs, facilitated the construction of an imaginary world that, at the time would have stood out as detailed, original and consistent, making the franchise popular and financially successful (King & Borland, 2003).

The dungeon crawler, exemplified by *Dungeon Master* (1987) evolved from the dungeon experience visible also in early *Ultima* games. The external world was removed in favour of a more sophisticated 3D first-person dungeon experience. Rather than seeking to enhance the world-building capacity of the cRPG, *Dungeon Master* and subsequent dungeon crawlers concentrated on the capacity for immersion. If the top-down open-world cRPG expanded on the digital medium's encyclopaedic and spatial affordances, the dungeon crawler focussed on the procedural and participatory aspects (Murray, 2012). This was achieved by leveraging the computer's audio-visual capacity on the one hand, and a move away from tabletop-based game mechanics towards more unique cRPG solutions on the other. *Dungeon Master* abandoned the turn-based gameplay that had been practically standard in cRPGs, in favour of real-time action. The player was thus forced to react dynamically to multiple simultaneous events; player actions were also streamlined, removing some of the decision-making afforded by turn-based mechanics, in favour of execution speed (Pepe, 2017).

The dungeon crawler was one of the dominant forms of cRPG in the middle 1990s (Barton, 2008). Dungeon crawler RPGs continued enhancing audio-visual immersion, while also developing more sophisticated real-time mechanics, including the simulation of basic physics as seen in the *Ultima* dungeon crawler spin-off *Ultima Underworld: The Stygian Abyss* (1992). By shifting towards direct simulation of interactions, dungeon crawlers were also reducing the reliance on virtual dice rolls as determinants for action outcomes, with success becoming less dependent on the player character's attributes and dice rolls, and more dependent on the player's own gaming skills.

The open-world and dungeon crawler sub-genres eventually converged, the latter acquiring open-world traits by opening the gameplay beyond the dungeon, into cities and other non-combat-oriented sites. Another development was the change of the RPG from multi-character to single character. Early RPGs often had the player controlling a group, or party, of characters to imitate the tabletop experience

(Barton, 2008). However, action-oriented RPGs like *Ultima Underworld* and *Legends of Valour* (1992), instead cast the player in the role of a single character. One character was easier to control in real-time, and allowed the player to directly identify with their on-screen avatar as an alter ego, a relationship so frequently explored in game studies (cf. Gee, 2006; Tanenbaum, 2008; Waggoner, 2009)<sup>28</sup>.

The dungeon crawler, especially *Ultima Underworld* and *Legends of Valour*, and the early open-world games like *Ultima VI* provided key influences for the first *Elder Scrolls* games (Barton, 2008; The Unofficial Elder Scrolls Pages, 2014). The former would influence the game's first-person perspective and action-oriented mechanics, while the latter would provide methodological blueprints and benchmarks for world-building.

### 3.2 *The Elder Scrolls* – a summary

*The Elder Scrolls* as a franchise may be defined through three time periods of uneven length, bookmarked by the development of the main titles in series. The first two games, *The Elder Scrolls: Arena* (1994) and *The Elder Scrolls II: Daggerfall* (1996) can be described as an incunabular phase (Murray, 1997) where the first world-building attempts are marked by technological and design problems associated both with the inexperience of the team (Indigo Gaming, 2017), and with the integration of the dungeon crawler and open-world traditions.

*The Elder Scrolls III: Morrowind* (2002) and its two expansion packs, *The Elder Scrolls III: Tribunal* (2002) and *The Elder Scrolls III: Bloodmoon* (2003), constituted the second, immature phase in the history of the series. *Morrowind* was well beyond an incunabular open-world RPG, and was built with a broad array of world-building techniques to establish an attractive imaginary world, and particularly to establish a sense of environmental, social and cultural presence. Nonetheless, the game still had certain mechanical characteristics more typical of *Daggerfall* than of subsequent *TES* games. *Morrowind* was a transitional object between the incunabular and the modern stage.

*The Elder Scrolls IV: Oblivion* (2006) opened the third stage in the progression of *TES* and its world. With *Oblivion*, all the fundamental gameplay and world-building elements are in place both in terms of the subcreation of the world behind the scenes, and of the techniques used in the game to depict this world to the audience. *Oblivion* was followed by two expansions, *The Elder Scrolls IV: Knights of the Nine* (2006) and *The Elder Scrolls IV: Shivering Isles* (2007). This third stage of the series came into full fruition in the fifth game *The Elder Scrolls V: Skyrim* (2011), along with its three downloadable expansions, *The*

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<sup>28</sup> The term *avatar* was in fact first coined within the diegesis of the *Ultima* series as a way of highlighting the player character's unique status as an almost deity-like figure that has arrived from outside of the game's world to resolve its problems. The fourth game in the series was called *Ultima IV: Quest of the Avatar* (1985).

*Elder Scrolls V: Skyrim – Dawnguard* (2012), *The Elder Scrolls V: Skyrim – Hearthfire* (2012) and *The Elder Scrolls V: Skyrim – Dragonborn* (2012). *Skyrim* did not incorporate any new world-building techniques or other innovations, instead concentrating on polishing features established in earlier games.

Several spin-off *TES* products exist outside of the main series (Table 3), including books, action games, mobile adaptations, and an MMORPG, *The Elder Scrolls Online: Tamriel Unlimited* (2014; ESO).

Year released	Product name	Expansions / DLC (year released)	Genre	Platform
1994	<i>The Elder Scrolls: Arena</i>		Open-world RPG	PC
1996	<i>The Elder Scrolls II: Daggerfall</i>		Open-world RPG	PC
1997	<i>An Elder Scrolls Legend: Battlespire</i>		Action RPG	PC
1998	<i>The Elder Scrolls Adventures: Redguard</i>		Action-Adventure	PC
2002	<i>The Elder Scrolls III: Morrowind</i>	<i>Tribunal</i> (2002) <i>Bloodmoon</i> (2003)	Open-world RPG	PC / Xbox
2003	<i>The Elder Scrolls Travels: Stormhold</i>		Dungeon crawler RPG	Mobile (J2ME/BREW)
2004	<i>The Elder Scrolls Travels: Dawnstar</i>		Dungeon crawler RPG	Mobile (J2ME/BREW)
2004	<i>The Elder Scrolls Travels: Shadowkey</i>		Open-world RPG	Mobile (Nokia N-Gage)
2006	<i>The Elder Scrolls IV: Oblivion</i>	<i>Knights of the Nine</i> (2006) <i>Shivering Isles</i> (2007)	Open-world RPG	PC / Xbox 360 / PS3
2006	<i>The Elder Scrolls Travels: Oblivion</i>		Dungeon crawler RPG	Mobile (J2ME/BREW)
2009	<i>The Infernal City</i>		Fantasy novel	Book
2011	<i>Lord of Souls</i>		Fantasy novel	Book
2011	<i>The Elder Scrolls V: Skyrim</i>	<i>Dawnguard</i> (2012) <i>Hearthfire</i> (2012) <i>Dragonborn</i> (2012)	Open-world RPG	PC / Xbox 360 / PS3
2014	<i>The Elder Scrolls Online: Tamriel Unlimited</i>	<i>The Imperial City</i> (2015) <i>Orsinium</i> (2015) <i>Thieves Guild</i> (2015) <i>Dark Brotherhood</i> (2016) <i>Shadows of the Hist</i> (2016) <i>Morrowind</i> (2017)	MMORPG	PC / OS X / Xbox One / PS4
2016 (re-release)	<i>The Elder Scrolls V: Skyrim – Special Edition</i>		Open-world RPG	PC / Xbox One / PS4 / Nintendo Switch
2017	<i>The Elder Scrolls: Legends</i>		Digital card strategy game	PC / Mac / Smartphone (iOS/Android)

Table 3 Summary of TES products. Ancillary paratexts not listed.

### 3.3 Existing literature on *The Elder Scrolls*

Consalvo (2007) points to the size and complication of games like RPGs, as one of the causes for the rise of an ancillary industry publishing strategy guides – printed paratextual works providing extensive information about how to play the games successfully. The first published literature about *TES* came in the form of such paratexts. The guides provide a detailed summary of the content in every main game of



the series (Weller & Peterson, 1994; Wartow, 1996; Olafson, 2003; Olafson, 2007; Hodgson, Stratton, & Cornett, 2013), making them valuable for investigations of both world and gameplay.

Beside the official guides, unofficial, player-produced encyclopaedic resources exist, with three key resources being the UESP<sup>29</sup> and The Elder Scrolls Wiki (ESW)<sup>30</sup> collaborative wikipediae, and a more tightly-controlled website, The Imperial Library<sup>31</sup> (TIL). These resources are discussed further in the context of *TES* player PAS engagement. One other player-produced encyclopaedic resource warrants mention; Carsten Flaake's (2012; 2013) *The Elder Scrolls Treasury* is a set of seven digital books, consisting of the six-volume *Corpus Tamrielicum*, a collection of texts from within the *Elder Scrolls* world, and the single-volume *The New Encyclopedia Tamrielica*, presenting brief encyclopaedic entries on various aspects of the world. These player-produced resources are well-referenced, and present a formidable data set on any internal aspect of the *TES* universe.

### 3.3.1 First wave: *Morrowind*

The first *TES* game to receive any academic attention was *Morrowind*; the game's release in 2002 closely followed the emergence of game studies (Aarseth, 2001). *Morrowind* was considered an apt case to illustrate the methodological difficulties of studying video games, as well as to propose and test methodological frameworks (Aarseth, 2003; Bayliss, 2005; Lindley, 2005). In these initial stages, *Morrowind* was also discussed as an example of open-world 'amusement park' narrative structures (Majewski, 2003), successful emergent narratives (Arsenault, 2005), and as a game world within the context of a discussion on virtual presence in games (King & Krzywinska, 2006). A more unusual study of emergence involved using *Morrowind*'s modding capacity to create a testbed with a deeply emergent narrative situation (Landt, 2005)<sup>32</sup>. The game was also analysed as part of broader efforts to assess and demonstrate the ludological and narrative diversity in video games (Brand & Knight, 2005).

Another avenue of exploration was the relationship between players and in-game avatars (Waggoner, 2007), and the implications of this relationship in the context of education (Gee, 2006; Kadakia, 2005). Initial scholarly examinations of *Morrowind* concluded with Johnson's (2007) and Jakobsen's (2006) discussion of the online literary practices of *Morrowind* players.

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<sup>29</sup> <http://en.uesp.net/>

<sup>30</sup> [http://elderscrolls.wikia.com/wiki/The\\_Elder\\_Scrolls\\_Wiki](http://elderscrolls.wikia.com/wiki/The_Elder_Scrolls_Wiki)

<sup>31</sup> <http://www.imperial-library.info/>

<sup>32</sup> There are several references in this chapter to theses written in languages the author does not speak, including Danish, Swedish and Catalanian. It has been possible to acknowledge and describe these works because Google Translate provides a translation sufficient to understand the general content of a document, even if the deeper nuances remain problematic.

### 3.3.2 Second wave: *Oblivion*

Given the iterative nature of the series, scholarly attention usually concentrated on the most recent game in the series. Consequently, a second wave of academic interest followed the release of *Oblivion* in 2006. While not all the game aspects discussed in the context of *Oblivion* may be applicable to the earlier games, the opposite is true; for instance, the relationship between the player and the avatar described by Waggoner for *Morrowind* was similar enough to *Oblivion* that his follow-up publication (Waggoner, 2009) still relied on *Morrowind* at its core, with *Oblivion* receiving relatively little attention.

*Oblivion* attracted scholarly attention as a virtual world with its sense of presence, which could be deconstructed and examined in its environmental, social and cultural aspects (Champion, 2007; 2008). Tanenbaum (2008) used believability, adaptivity, and performativity as three lenses to examine *Oblivion*. Champion and Tanenbaum both praised *Oblivion* in its environmental aspects, but found its social and cultural aspects disappointing, in contrast to the acclaim the game received from reviewers (Metacritic, 2006). However, Lankoski and Björk (2007), in their close analysis of one *Oblivion* character, point out scholarly criteria for believability may be higher than the criteria set by the players in line with genre expectations. *Oblivion* was also central in Bostan's (2009) analysis of the scholarly literature around the requirements for presence. A belated entry into the discussion of presence in *Oblivion* would come later from psychology (Wirth, Ryffel, von Pape, & Karnowski, 2013), where player sense of immersion was measured over the span of the game. Related to presence, Carlsson (2007) investigated the use of music across three video game series, including *TES* as represented by *Morrowind* and *Oblivion*.

*Oblivion*'s landscapes became a second focal point for research. Briefly discussed by Champion (2007), the landscape was examined for its role in building and communicating the game's narrative themes by Martin (2011a; 2011b). Rozak (2013a) analysed procedural content generation in *Oblivion*, before embarking on a broader deconstruction and design analysis of the game's world-building in its environmental, social and cultural aspects (2013c).

Another theme in scholarly interest for *Oblivion*, was the game's emergent mechanics, especially artificial intelligence (AI). This included the impact of emergent AI behaviour on the player experience (Aarseth, 2007b; Tanenbaum, 2008), and the lessons to be drawn, from an industrial perspective, for emergence (Sweetser, 2008). The potential conflict between the emergent, potentially infinite experiences of a virtual world, and a pre-designed linear narrative was discussed by Tanenbaum (2008), Wardrip-Fruin (2009), and Ken Rolston (2009), the lead designer for both *Morrowind* and *Oblivion*. Finally, Calleja (2011) used *Oblivion* as an example when examining various aspects of player immersion and involvement in games. Calleja described *Oblivion* as an example of what game designer Ken Levine

calls *pull narratives*, characterised by narrative information being embedded into the world for the player to discover, rather than being ‘pushed’ in the player’s face.

*Oblivion* was also used as a development platform for cultural heritage mods (Fassbender, 2012), including Scandinavian-themed projects, *Norse* (2009) (Flarup, 2009; Partorp, 2009), and *Norse Gleipnir* (2011) (Flarup, 2010) that seemed to presage future cultural heritage interest in *Skyrim*.

*Morrowind* received little attention during the *Oblivion*-oriented investigations of presence and world-building, outside of Barton’s (2008) and Tresca’s (2011) RPG genre histories. One noteworthy *Morrowind* study in this period was Ferrari’s (2010) examination of *Morrowind*’s use of game mechanics as procedural rhetoric (Bogost, 2007a) to communicate various aspects of its cultural setting, a form of argument-building known as procedural rhetoric. Other, smaller and less relevant studies discussing *Morrowind* and *Oblivion* include Brown (2008), Klaus (2010), Pelkonen (2010), and Forest (2011).

### 3.3.3 Third wave: *Skyrim*

Most game studies investigations of *Skyrim* have focussed on cultural content within the game, the activities of the audience around the game, and the intersection between the two. *Skyrim*’s Scandinavian-inspired setting has generated both criticism for its apparent perpetuation of historical stereotypes (Softysiak, 2015), and praise for giving players an opportunity to experience Scandinavian CH (Johnson, 2013), even if to a limited degree. The most comprehensive, though shallow description of mythological and cultural analogies between *Skyrim* and Scandinavian culture came out of Scandinavian religious studies (Daun, 2014).

Scholars have also continued investigating the series’ approach to the Medieval on the example of *Skyrim* (Fernández Torner, 2015), noting how *Skyrim* re-mediate the Middle Ages in relation with the modern world, littering its historical fantasy with modern sensibilities (Antley, 2012) and perhaps reflecting modern anxieties (Donnelly, 2014). As with presence in *Oblivion*, the discussion around culture in *Skyrim* has concentrated on its shortcomings; both Softysiak (2015) and Johnson (2013) argued game developers need to be guided by academics to produce better depictions of history. However, this discussion of *Skyrim*’s cultural inadequacies needs to be seen in context; as with *Oblivion*, these critiques signalled the game was strong enough to warrant such attention. Granström (2013) has pointed to the game as the most successful embodiment of the elements identified by heritage scholars as important for VH. *Skyrim*’s value as an exploration of Scandinavian culture led Rice University in the United States to offer a class, *Scandinavian Fantasy Worlds: Old Norse Sagas and Skyrim*<sup>33</sup>, where *Skyrim* was used as

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<sup>33</sup> This class seems to have proven short-lived, having been offered once (Rice University, 2013). Some discussion of the class contents and the outcomes of its 2013 iteration, can be found in Donnelly (2014).

the access point towards Scandinavian culture (Donnelly, 2014). Finally, Simpson (2015) examined how *Skyrim* along with another Bethesda open-world RPG, *Fallout 3*, simulate systems of racial marginalisation in the broader context of investigating the possibilities of using video games to simulate real-life discrimination and marginalisation.

The cultural exploration trend has not been limited to *Skyrim*. DiPietro (2014) explored how *TES* texts imitate medieval academic discourse, while Rowland (2014) noted the resemblance between RPG maps, including *Oblivion*, and medieval maps. Another study (Sauceda, 2013) examined *Morrowind*'s depiction of the nomadic Ashlander faction from the perspective of Native American studies.

Another novelty in scholarly investigations of the series has come from religious studies, an indication of the cultural depth of *TES* worlds. The most notable was Wise's (2014) collection of theological papers exploring various aspects of religion across the series, focusing on *Morrowind*<sup>34</sup> and *Skyrim*. This collection also included Hayse's (2014) less theological exploration of the procedural rhetoric of the games, and whether players truly have as much freedom as the series claims. Other, less relevant works around religion and mythology include Ode (2012), Bainbridge (2013), Tuckett (2013), Tuckett and Robertson (2014), and the mythology-oriented Sirangelo (2014).

*Skyrim* and its player community have also inspired attention from an audience studies perspective. Puente and Tosca (2013) examined the range and nature of the *YouTube* videos produced by *Skyrim*'s audience, while Hackman and Björkqvist (2014) investigated the motivations of *Skyrim* modders. Johnson's (2013) heritage-oriented study examined how *Skyrim* players engage with history.

Other works approached *Skyrim* from a game design perspective. Totten (2014) described *Skyrim*'s use of geography to guide the player into a network of quest nodes. Less relevant design-oriented studies included Hjelm (2013), Amigo and Larsson (2014), and Howard (2014).

A final extension of research on *The Elder Scrolls* and audience activities, occurs outside of the context of audience studies. Over the course of the decade since *Oblivion*, there has been growth in scholarly discourse around the concept of digital humanities. While the exact nature of digital humanities is broad and elusive (Jones, 2014), to some degree it may be summed up as humanities done with the aid of computer technology deeper than the use of word-processing packages, for example for visualisation. Video games have been a significant conversation topic in digital humanities (Jones, 2014), including *Skyrim* and to a lesser extent *Oblivion*. Research around the application of games for heritage is one

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<sup>34</sup> While scholarship around the series concentrates around the most recent game, *Morrowind* comes back occasionally. The same applies to modding; of all *The Elder Scrolls* games so far, *Morrowind* has had the most verifiably enduring impact (Macgregor, 2017).

aspect of digital humanities, and Champion's *Critical Gaming* book (2015) is an example; in discussing this topic, Champion updates his earlier analyses of *Oblivion*, and expands the conversation to *Skyrim*. He highlights the possibilities afforded by the books present inside *Skyrim*, a topic he also discussed elsewhere in a more explicitly digital humanities context (Champion, 2014). The game becomes a tool to teach not only about a culture, but also to teach about broader concepts related to literacy, or even art preservation (Goins, Egert, Phelps, Reedy, & Kincaid, 2013). Modding *Skyrim* becomes not only a way of generating additional content for educational purposes, but an educational activity in its own right (Champion, 2012b; Mummert, 2014), raising the possibility of turning the game into a virtual laboratory for experimental exploration of the humanities (Champion, 2014; 2015). Champion remains highly critical of cultural depth in *Skyrim*, and does not significantly revise his earlier conclusions on cultural presence in *Oblivion*, claiming *Skyrim* fails in this regard. This is an interesting contrast to other scholarly explorations of culture in *Skyrim* as described here; Champion's position on the failure of cultural presence in *Skyrim* seems problematic given research documenting religion in *TES* (e.g. Tuckett, 2013; Tuckett and Robertson, 2014), or research on cultural heritage in *Skyrim* (e.g. Johnson, 2013; Granström, 2015).

The third wave can be concluded with the first emerging research on *The Elder Scrolls Online (ESO)*, e.g. Brown (2015) and Pelkonen (2016). These are beyond the scope of this review.

### 3.3.4 TES literature summary

*TES* has been the topic of broad, but visibly discontinuous scholarly inquiries. From *Morrowind* to *Skyrim*, each game was central to new lines of inquiry, subsiding with the release of the next title. An exception is *Morrowind* (e.g. Ferrari, 2010; Ode, 2012; Saucedo, 2013; Wise, 2014), which defies the overall tendency to concentrate on the most recent titles<sup>35</sup>.

No one aspect of the games has been explored in depth; even in the case of the research on presence, little work has been done on *how* the games work to build presence. The broader framework of world-building remains weakly explored. Some researchers have noted the fusions of fantasy tropes with distinguishable real-world cultures (e.g. Johnson, 2013; Saucedo, 2013; Sołtysiak, 2015; Daun, 2014). Others have mentioned in passing some world-building features and techniques used by the games through geography (Totten, 2014), or by distributing lore through books with multiple subjectivities (DiPietro, 2014), but there is no attempt to build a complete picture of features and techniques, nor is

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<sup>35</sup> Explaining this tendency is beyond the scope of this research. One possible reason is the relative novelty of the medium in which there aren't yet many widely recognised canonical works. A more prosaic reason could simply be that given the technological orientation of the medium, scholars concentrate on the most recent game to maximise the currency of their work.

there any attempt to describe the series as a continuous entity. Wolf (2012), in his in-depth exploration of world-building across the media, concentrated his investigation of video games on multiplayer virtual worlds, devoting little space to single-player worlds. Finally, the existence of player communities around *TES* is noted, but little has been written about the possibilities the games afford to lore-oriented players and to modders.

The rest of this chapter lays the foundations for a deeper examination of world-building in *Skyrim* and of its active audience. For this purpose, the history of the series and its imaginary world is summarised. This is followed by a summary of the history of audience engagement with the series.

### 3.4 Series history

This section aims to lay down the foundations for the in-depth studies of the world-building tools and methodologies of the *Elder Scrolls* series, and of the *TES* audience PAS activities. The discussion of *TES* history is therefore constrained to an overview of the evolution of *TES* from *Arena* to *Skyrim*, and a summary of the history of the *TES* audience PAS.

While game mechanics are not a crucial concern for this study, an examination of this aspect of the series is warranted not only by the need to provide a context for the world-building aspects, but also due to the critical academic discussions around the subject. Scholars have pointed out a violent, militaristic tendency in video games generally (Crogan, 2011), the combat-centrism of the computer RPG (Tresca, 2011), and of *The Elder Scrolls* specifically (Hayse, 2014). *Skyrim* is noted as encouraging disrespectful and destructive treatment of heritage by romanticising tomb-raiding (Shephard, 2013; Champion, 2015). Consequently, proponents of game-based CH urge caution when importing game features into heritage (Granström, 2013; Champion, 2015). Simultaneously, there is a tendency within cRPG including *TES*, to broaden the gameplay beyond violent competition (Hayse, 2014). This tendency warrants examination to document the development of gameplay possibilities beyond combat.

#### 3.4.1 The incunabular phase: *Arena* and *Daggerfall*

*The Elder Scrolls* series is situated on the continent of Tamriel within the imaginary world of Nirn, whose creation preceded the establishment of the game series. Nirn was originally conceived as a setting created by the employees at the American games development studio Bethesda Softworks for use in their pen and paper role-playing sessions of *Advanced Dungeons & Dragons* (The Unofficial Elder Scrolls Pages, 2014; Majewski, 2017b). As a world, Nirn is its own ontological frame of reference, with no connection to reality, and over time has come to possess its own cosmology, theology, and history. From the perspective of fantasy literature, the game can be classified as high fantasy (Wolfe, 1986).

As a cRPG, *The Elder Scrolls I: Arena* has been described as a combination of *Ultima Underworld* and *Ultima VII: The Black Gate* (1992) (Barton, 2008), an influence the game's designers readily acknowledge, while also pointing to *Legends of Valour* as an inspiration (Morrowind Italia, 2001). A 3D first-person action-oriented interface for dungeons and cities was combined with a 2D world map for long-distance travel.

*Arena* began with a generic and undetailed world, relying on the sheer size of the playing area as a selling point (Morrowind Italia, 2001). The landscapes outside of the cities were generated procedurally by the game, rather than crafted by designers (McGregor, 2015). The continent of Tamriel was presented in its entirety, but each of its nine provinces was limited to one landscape type. There was a desert province, a volcanic province, a swamp province, and so on. The province of Skyrim, whose depiction two decades later in *Skyrim* would become detailed and deep enough to justify scholarly examination, was simply the cold mountainous province. Stereotypically, each of *Arena*'s provinces was inhabited by one homogenous ethnic/racial group matched to the landscape.

At a time when most RPGs used a small playing area (Barton, 2008), *Arena*'s low-granularity, but vast world was attractive and remarkable (McGregor, 2015). *Arena* further emphasised its scope by relying on open gameplay, a core feature made explicit in the game manual with a wistful appeal to the freedom of action offered to players in tabletop RPGs lost in the transition to cRPGs: "*Remember the old pencil-and-paper RPG's? The limits of your adventure were only defined by your own imagination. The dungeon master [...] allowed the players to explore the world he had created*" (Lakshman & Meile, 1993, p. 5). *Arena*'s manual also explicitly invited players to try playing without touching the main quest.

*Arena*'s 1996 sequel *Daggerfall* was designed with the aim of making *TES* less generic as a world (Morrowind Italia, 2001). Rather than replicate *Arena*'s continental-scale setting, *Daggerfall* concentrated on a smaller fragment of Tamriel, but provided more detail and a contiguous 3D world navigable without using the 2D map. The two provinces depicted in the game were fleshed out, with varied landscapes and socio-political structures, more diverse NPC roles, and the introduction of several fantasy creatures unique to *The Elder Scrolls*. The game world also incorporated various dynamic structures, with cities and factions engaging in wars, while in the backdrop events such as plagues break out and taper off periodically. These events appear to be random, and oriented towards the illusion of a dynamic social world. Similarly, the dungeons of *Daggerfall*, which as the game guide notes are often not dungeons at all, but other types of structures (Wartow, 1996), are for the most part constructed out of random segments; like in *Arena*, they are also populated with random opponents. The role of dungeons in *Daggerfall* was to contribute to the feel of the world, and to provide gameplay

opportunities, but, except for the pre-designed dungeons of the main quests, they were not intended to contribute towards a cohesive world.

*Daggerfall* also introduced diegetic books, a feature imported from the *Ultima* series. A typical *Daggerfall* book filled only about two A4 pages of real print, albeit some books were even twenty pages long. With 59 books in the game<sup>36</sup>, *Daggerfall* effectively incorporated more than 200 pages of additional diegetic exposition into the world, enabling the developers to incorporate Tolkienesque *distant mountains* (Schell, 2015) into the world in a natural manner, creating the illusion of a deeper and broader world with a substantial chronology, though still relatively little culture. The addition of readable books is a natural extension for a virtual world, given the encyclopaedic capacity of computer software and the encyclopaedic expectation this arouses (Murray, 1997). In Wolf's (2012) terms, books serve to strengthen a world's sense of completeness by creating a more complex background, as well as radically increasing the possibility of saturation by providing the player with an overwhelming amount of additional information. Books provide a naturalistic manner of encountering a world, as to experience them, the player must first obtain the book, and then spend time reading it.

The diegetic books were explicitly subjective and unreliable. The process of creation of historical sources was foregrounded in the figure of Queen Barenziah, a political persona in the game and the subject of two diegetic biographies; an official, authorised biography, and an unauthorised version aptly titled *The Real Barenziah*. The Queen requests the player to locate the manuscript of *The Real Barenziah* which discusses damaging details of her life, so she may censor the book. During the quest, players could encounter the 'unpublished' manuscript in its complete form, but when the same book showed up in 'published' form in later games, large sections of that original manuscript had been expunged; an act of diegetic censorship highlighting the potential unreliability of diegetic books. By asking the player to rely on such explicitly subjective and unreliable sources, the developers turned the mechanical process of exposition into a world-building mechanic. Subjective sources underlined the existence of complex socio-political discussions around these events and invoked a sense of the medieval by linking the game's literature to medieval scholarly traditions (DiPietro, 2014).

*Daggerfall* also injected a key alteration into the game mechanics by introducing a skill-based system of character progression based on the tabletop RPG system *RuneQuest* (1978) (K. Rolston, personal communication, October 14, 2017). Where previously players would advance only by killing enemies and receiving experience points as a reward, character advancement now depended on the usage of skills, and players could progress in meaningful ways outside of combat (Wartow, 1996). Nonetheless, the

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<sup>36</sup> Abbreviated table comparing the literature content of all the *TES* games is present in Appendix J.



game still relied on combat to drive the narrative, and did not provide the player with any kind of alternative goals beyond the accumulation of combat power (Hayse, 2014).

*Daggerfall* was followed by two spin-off action games, *An Elder Scrolls Legend: Battlespire* (1997), and *The Elder Scrolls Adventures: Redguard* (1998). Both titles contributed to the world-building of the *TES* imaginary world, but as non-RPG spin-offs, they did not warrant examination here. This would also be the case for the later *The Elder Scrolls Travels* (2003-2006) sub-series of mobile phone spin-offs. Although technically fully-fledged RPGs, these games were too limited by the mobile technology of the pre-smartphone era to contribute significantly to *The Elder Scrolls*, and are not examined here.

### 3.4.2 Towards modernity: generic evolution in *Morrowind*, *Oblivion* and *Skyrim*

The next two games in the series, *The Elder Scrolls III: Morrowind* (2002) and *The Elder Scrolls IV: Oblivion* (2006), constituted ongoing development of the world-building tools and strategies established in *Daggerfall*.

Technological development in *Morrowind* facilitated a game world far more detailed and interactive than earlier games (McGregor, 2015), with the player for the first time being able to manipulate items with no gameplay value: cutlery, tableware, and other items of everyday clutter. Simultaneously, environmental storytelling (Jenkins, 2004; Wolf, 2012) became a focus; where *Daggerfall* employed a procedurally generated exterior and frequently randomly generated interiors, *Morrowind* and its sequels were hand-crafted. With every object in the game world being placed by a designer, locations could now reveal stories not only through books, but even through the placement of items relative to each other. For instance, the placement of other items around a corpse could tell the story of how the person in question died. The environment itself was also far more revealing; varied and complex landscapes matched geographic location types with specific plants and animals into a consistent habitat. Weather, while simplistic due to the lack of seasonal variation, was also matched with particular locations to further explain the existence of biomes and contribute to an overall sense of environmental presence (Champion, 2007). Dungeons became diegetically justified locations, populated by diegetically characters, creatures and objects: mines, ruins, temples, smuggling dens, and so on (Olafson, 2003).

To facilitate the substantially higher level of detail throughout the game world, the developers reduced scope. Where *Daggerfall* presented a realistically-sized landscape that literally took days to traverse, *Morrowind* shrunk its landscape to approximately 24 square kilometres (McGregor, 2015). Both games covered areas that, on a map of Tamriel, appeared roughly equal in size, but *Morrowind* communicated this size through a form of impressionism (Liesegang, 2014). For instance, a location the diegesis implied was a city, would in the game consist of perhaps twenty buildings: the game wasn't interested in

depicting a city accurately, but instead in giving an impression of a city. This form of impressionism encompassed most aspects of the game, with another example being the diegetic books, visibly appearing to be of substantial size, but in fact only having several pages each.

The impressionist approach to world-depiction also facilitated more detailed NPCs. Previously, *Arena* and *Daggerfall* relied mainly on procedurally generated characters who, with exception for individuals critical to the story, were incapable of individualised conversations; such an approach, particularly in *Arena*, facilitated extensively populated cities with seemingly endless inhabitants. *Morrowind* and *Oblivion* reduced the number of NPCs in favour of providing them with more detail and individualisation. Most characters in the game now had names, and were could provide a broader range of nuanced responses to the player's actions, including some semblance of a conversation. These relations could be affected by the player's interaction with the world, and characters would react differently to the player depending on his health, clothes, affiliations, reputation, actions, and the character's own prejudices. While relatively weak and limited in many aspects, this system provided some semblance of social presence (Champion, 2007). There was also an attempt to connect the social and cultural aspects by introducing behavioural norm differences between certain cultural groups. The development of cultural content in these games involved extensive borrowing of material from the primary world, with each culture in the game being consciously based on one or multiple real-world counterparts (Sinder Velvin, 2008; Qwerty, 2010). A paradoxical piece of evidence attesting the effectiveness of *Morrowind's* cultural depictions can be found in the criticisms levelled against the game by Saucedo (2013); Saucedo argues *Morrowind* functions as an ideological tool for repression of Native American culture, by marginalising the indigenous Ashlanders whose culture, he argued, appropriates some aspects of Native American culture<sup>37</sup> and confirms Native American repression. Given *Morrowind's* fantasy nature, as well as his misreading of the game's plot in which the player actually works with the Ashlanders (Olafson, 2003), Saucedo's conclusions are problematic. However, it is notable Saucedo was so clearly able to read the inter-cultural power relations the developers transmitted through a combination of narrative events, environmental storytelling, material culture, books, and dialogues.

*Morrowind* and *Oblivion* no longer featured the dynamic world events *Daggerfall* had featured previously (compare Wartow, 1996; Olafson, 2003). Creating a dynamic, changing world is problematic, as it involves the creation of extremely complex NPC agents capable of both reacting to change and

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<sup>37</sup> This cultural identification is questionable. The yurt-dwelling, ancestor-worshipping Ashlanders also resemble the indigenous shamanist cultures of Mongolia and Siberia. However, as Saucedo (2013) shows, regardless of actual inspirations, the audience saw Ashlanders as based on Native Americans, producing mods adding Native American-inspired details to Ashlander material culture.

enacting it (Rozak, 2013b). However, the growing multiplicity and diversity of quests and pre-determined world changes in reaction to quest outcomes (cf. Olafson, 2003; 2007), provided the possibility of creating an illusion of change in the game world. The quests construed a range of events that, by their dependence on the player, were at once dynamic and predictable, and thus could be used as convenient triggers of change in the world (Rozak, 2013c).

Not incunabular, *Morrowind* was immature compared to later games; it was a transitional object. The game's gameplay characteristics remained similar to *Daggerfall*, and connected the game more with traditional tabletop RPG or older cRPG gameplay than with subsequent titles in the series. It was only after *Morrowind* the series eschewed some of the classic tabletop RPG features still present in *Morrowind* in favour of an approach best described using the information technology acronym WYSIWYG: what-you-see-is-what-you-get (Majewski, 2017b). Combat in *Oblivion* no longer used virtual dice rolls to determine the outcomes of actions, and instead opted for a simulation-oriented approach, where an action is played out and allowed to succeed or fail in accordance with logical rules. Where *Morrowind* relied on an invisible dice roll to determine if a sword strike had hit an opponent, *Oblivion* simply detected if the 3D model of the sword in the player's hand touched the 3D model of the opponent during the strike. *Skyrim* would continue this trend, by removing a range of player character statistics such as strength and dexterity that had previously been used to determine the success of player actions, retaining only the basic attributes of health, magicka and fatigue. The classical RPG system employed earlier had fostered combat complexity by facilitating myriad ways of equipping a character, with particularly magical items often providing specific functionality applicable in such a limited range of ways, that the process of equipping a character became a pivotal choice (Keddie, 2014). *Oblivion* and *Skyrim* shifted a part of the combat complexity into the action itself, using special moves and combinations of actions leveraging the player's own manual skills rather than the avatar's statistics to determine success.

The evolution of gameplay mechanics in *Oblivion* and *Skyrim* was profound; some players used to the classic mechanics of tabletop RPGs would question if these games were still RPGs (Sambeteanu, 2006). However, if the broader RPG genre is examined, an argument may be made *Oblivion* and *Skyrim*, in moving away from tabletop RPG mechanics, have moved closer to the mechanics of live-action RPG (LARP) games. Where tabletop and computer RPGs disembodiment players, separating them from their characters, these forms of RPGs concentrate precisely on embodiment, merging player and character into a single entity, with statistics-based mechanics removed in favour of real-time interaction between players (Hitchens & Drachen, 2008). Virtual world designer Richard Bartle (2004) uses the example of an arrow strike to succinctly explain the difference between pen & paper, classic computer RPG, and LARP:

in pen & paper, the player rolls dice to determine success; in a computer RPG, the computer rolls an invisible dice for the player; finally, in a LARP, a safety-tipped arrow is actually launched by the player to directly determine the hit. Extending Bartle's analogy into *The Elder Scrolls*, a physical simulation of an arrow flight was used to determine hits partially in lieu of dice rolls as early as *Morrowind*, but *Oblivion* and *Skyrim* further extended these mechanics with the introduction of a broader simulation of physical interaction. The arrow thus exemplifies a general tendency in *TES* to move towards LARP-like direct re-enactment of actions, albeit virtual actions in a virtual world in place of live actions in the real world.

Because of their focus on real-time interaction between players, and the cumbersome nature of safely recreating live-action combat (Bartle, 2004; Balzer, 2011) LARPs often ignore combat entirely<sup>38</sup>. As is also evident when LARPs are applied for CH (e.g. Mochocki, 2012), LARPs tend to depend more on non-violent interaction, plot, dialogue and character-based immersion to build what Balzer (2011) describes as surplus reality. Thus, as *Oblivion* and *Skyrim* drifted towards the LARP tradition, the games have also provided a broader and deeper range of non-combat activities and storylines (cf. Champion, 2007; 2014). While combat remains central to most of the game's narratives (Hayse, 2014), as the focus on LARP-like direct interaction with a (virtual) world grows, the series advances its focus on world-building and on forms of interaction with the world alternative to combat mechanics. However, these aspects remain little explored, particularly in their world-building dimensions.

### 3.4.3 *TES* games after *Skyrim*

This study concentrates on *Skyrim*, and it is unnecessary to discuss *TES* spin-off products released after *Skyrim*, *The Elder Scrolls Online* (2014) and *The Elder Scrolls Legends* (2017), except to explain why they are not the topic of the study. The latter is a digital multi-player card game, unlikely to contribute significantly to world-building, and in any case released in the final year of the study. *ESO* could be potentially more interesting, as it appears to be as visually detailed as *Skyrim*. However, like all MMORPGs, *ESO* must exclude most forms of player modding in the interest of maintaining a level ground for players. Examining *ESO* as an example for heritage would therefore *a priori* exclude researching the possibilities of modding collaboration with players in the PAS context. Secondly *ESO*'s core gameplay experience is still simplified compared to *Skyrim*, particularly in interaction with NPCs, less important in a player-centric MMORPG context (Bartle, 2004).

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<sup>38</sup> However, LARPs are also closely related to a potentially more visceral and violent celebration of heritage, namely historical re-enactment (Howard, 2003). Battle re-enactments involve extensive simulated combat and occasionally, non-simulated injuries. One of the author's acquaintances suffered partial loss of hearing while re-enacting the Battle of Grunwald of 1410. Undoubtedly, similar if milder injuries can occur in LARP combat.

Ultimately, *ESO* is best investigated from perspectives other than heritage (e.g. Brown, 2015; Pelkonen, 2016). Meanwhile, the other aspect of the series to be examined at the literature review stage of this research are player activities in *TES* passionate affinity spaces.

### 3.5 A history of player engagement in *TES* passionate affinity spaces

The earliest online fan communities for video games can be traced back to the early 1990s, with the *Ultima* series developing an organised group, the *Ultima Dragons* in early 1992 (Fallible Dragon, 1997). The *TES* series developed an online community soon after *Arena*'s release in 1994, while the earliest still identifiable website, the Daggerfall FAQ, appeared in 1995, and remains extant today, having subsequently developed into the UESP (Unofficial Elder Scrolls Pages, 2012). Hacking and modding efforts were also initiated relatively quickly, with utilities allowing players to cheat by modifying their saved characters in *Arena* emerging in 1994 (Unofficial Elder Scrolls Pages, 2016a), while the oldest known mods adding new content into a *TES* game were developed for *Daggerfall* in 1998 (Unofficial Elder Scrolls Pages, 2016b). However, *Daggerfall* had not been designed for modding, forcing modders to develop their own tools to edit the game and implement new content. These early efforts remained minimal in scale.

The early knowledge accumulation and modding efforts concentrated on gaining advantage in the game, rather than collecting lore or producing new diegetic content. These interests fit well with Consalvo's (2007) characterisation of the period in the context of her history of cheating. Additionally, there simply wasn't much world lore to accumulate; whatever there was, in any case, was already documented in the official guides for *Arena* (Weller & Peterson, 1994) and *Daggerfall* (Wartow, 1996).

#### 3.5.1 The modding PAS

Modding strongly expanded with *Morrowind*. In the context of *Morrowind*'s detailed and hand-crafted content placement, the development of strong world editing tools was crucial for the project (Unofficial Elder Scrolls Pages, 2014). The *TES Construction Set (CS)* was released with the game, giving players access to the main development tool used by the designers of the game. Similar releases occurred for *Oblivion* and *Skyrim*'s *Creation Kit*, as the latest version of the *CS* was called. Its availability also had implications for the lore community, with the possibility of using the *Construction Set* to directly open up the game's internal database and access all internal data, such as the attributes of items and characters, their distribution throughout the world, and their relationships to various game quests.

Even at the time of *Morrowind*'s release, player activity around *TES* had grown, aided by Bethesda's occasional hosting support, as well as the provision of discussion forums<sup>39</sup> which facilitating communication and exchange of resources. The availability of the CS resulted in rapid growth of modding around *Morrowind*, and then further expansion with *Oblivion* and *Skyrim* proportionate to the overall increase in *TES* players. While no precise statistics are available, Bethesda has stated 8% of all *Skyrim* players use mods, but less than 1% develop mods (Bethesda Game Studios, 2015). Given *Skyrim*'s sales of 30 million (Suellentrop, 2016) in real terms the number of mod users would still amount to nearly 2.5 million, but the total number of modders, who would not all be active at the same point in the game's market lifespan is less than 300,000. Modding remains the concern of an elite minority.

Modders engage in a broad range of efforts. Many of these are trivial, as in the case of the numerous 'companion' mods for *Skyrim* providing the player with a companion NPC who follows the player around on their journeys. More complex mods range from simple additions of new items, clothes, and houses for players to inhabit, to implementing new animated creatures, replacing environments (Image 5) and building new quests and locations, sometimes on a grand scale (cf. Birnbaum, 2013). Another example is the *Tamriel Rebuilt* project for *Morrowind*<sup>40</sup>, recreating the parts of the *Morrowind* province that had not appeared in *Morrowind* the game, in conformity with existing lore. The same team had made an abortive attempt to implement another province, Hammerfell. Although not completed, Hammerfell concept art, collated by modders in an art book, illustrates how modding combines creativity and real-world influences with a desire to stay within the limits of the established *TES* universe (Tamriel Rebuilt Community, 2009). Equally ambitious attempts to expand an existing game with content from other parts of Tamriel are being pursued for *Skyrim* under the umbrella of the *Beyond Skyrim* project<sup>41</sup>.

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<sup>39</sup> <https://bethesda.net/community/>

<sup>40</sup> <http://www.tamriel-rebuilt.org/> . This project is still ongoing as of 2018.

<sup>41</sup> <https://beyondskyrim.org/>



Image 5 *Skyrim (original edition) reimagined as tropical landscape with Tropical Skyrim (2013) mod*

The SureAI team<sup>42</sup> pursued a series of ‘total conversion’ mods, i.e. completely new games set in a completely different setting, but built on top of an existing game (Laukkanen, 2005). SureAI’s projects included *Arktwend* (2006) for *Morrowind*, *Nehrim: At Fate’s Edge* (2010) for *Oblivion* and *Enderal: The Shards of Order* (2016) for *Skyrim*. These products used the game engine and some of its assets, like character animations, while replacing the remaining content with the modders’ own fantasy world. The process of creating a total conversion mod is like a game development company creating a second project on the same game engine,<sup>43</sup> but the modders pursue these projects without expectations of financial reward.

Total conversion mods are rare because of their scope. Modders typically concentrate on improving<sup>44</sup> the games by either incorporating small elements of new content, or by enhancing existing content. Modders would develop a range of graphical improvement mods, and world enhancements, ranging from added content to dramatic revisions of the game’s mechanics, such as multiple ‘realistic needs’ mods introducing the necessity of regular sleep and meal consumption for the player character. Many of these mods revealed a similar kind of desire for historical authenticity observed in historical game mods (Apperley, 2006; Majewski, 2017a). However, in this case the desire is for authentic history of a fantasy

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<sup>42</sup> <http://sureai.net/>

<sup>43</sup> The author speaks here from experience of both professional game development and modding.

<sup>44</sup> Improvements are subjective. The author uses the word here to denote the apparent intention behind different mods, not to indicate these products are genuine improvements.

world. The existence of various small problems in the game, a consequence of the impossibility of fully testing an open world (Ruberg, 2007), has also encouraged players to start patching the game, with Ferrari (2010) even claiming the game's 'brokenness' inculcates a 'player-designer' identity in some players. The result was an unofficial patch fixing "several hundred" issues in both *Morrowind* and its expansions (Unofficial Elder Scrolls Pages, 2015b). Similar unofficial patches have been developed for both *Oblivion* and *Skyrim*.

Modders have also sought to re-create existing *TES* titles in new technology. One of the challenges video games face as a media is the obsolescence of earlier technologies and games, which can often mean a game will become completely impossible to access in its original form (Newman, 2012). For players of a series such as *TES*, even where an older game remains playable, there is often a desire to see how that older game could be transposed onto the newest game engine. A leading example are the efforts of the *TES Renewal* project<sup>45</sup> involving two consecutive attempts to re-create *Morrowind*, first as *Morrobivion* for *Oblivion*, and currently as *Skywind* for *Skyrim* (Macgregor, 2017). These projects cannot convey the original experience due to the evolution of gameplay between *TES* iterations (Keddie, 2014); yet, the goal they present remains enticing enough for these large teams to continue their efforts over years. These projects involve complete re-creation of all original game assets, including graphical objects, sound, and the game database of characters, items, and quest scripts.

A different challenge is faced by the re-creators of *Daggerfall*. This older game seems too large and daunting in scope for any team to re-create it in a modern *TES* engine; the gap in graphics between *Daggerfall* and present games also means such a re-creation would have to extensively re-imagine the world. There is an attempt at re-creating *Daggerfall* by effectively implement the game anew using a different game engine without re-creating assets<sup>46</sup>. The project instead directly reads *Daggerfall*'s original assets and displays them using modern hardware rendering with some enhanced visual effects. As a new game using old assets, *Daggerfall Unity* is both more and less than a mod; above all, however, it is a testament to the diversity of skills among fans, including not only game editing and graphical modelling, but also programming prowess. Like the perennial attempts to re-create *Morrowind*, *Daggerfall Unity* also demonstrates fan endurance, as the project's roots extend back to the year 2000 (Clayton, 2014). In 2011, a similar project, *OpenMW*<sup>47</sup>, was started for *Morrowind*.

*Daggerfall Unity* and *OpenMW* are only the most extreme cases of modders engaging with programming to enhance their work. On a smaller scale, *Morrowind*, *Oblivion*, and *Skyrim* have all seen the release of

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<sup>45</sup> <http://tesrenewal.com/>

<sup>46</sup> <http://www.dfworkshop.net/>

<sup>47</sup> <https://openmw.org/>



script extenders, and for *Morrowind*, a graphics extender. These extenders are executables providing an additional layer of functionality above the game itself, providing modders with the possibility of using new scripting commands in their mods, or for *Morrowind* implementing new visual special effects.

Except for large teams with dedicated websites, most modders distribute their work through three main channels, the Steam Workshop integrated into the Steam platform that *Skyrim* requires on the personal computer, as well as ModDB and Nexus Mods. There is significant overlap, with many modders choosing to distribute their work through two or three channels. The *Special Edition* of *Skyrim* released in 2016 has also introduced the possibility of distributing mods through Bethesda's own website; this is also the only option allowing mods to be released for the PS4 and Xbox One versions of the game<sup>48</sup>.

Mods can be disagreeable or outright offensive in nature, especially when touching on sexuality. On the less controversial end of this spectrum are the myriad scantily-clad women who are the mainstay of companion NPC mods; this spectrum continues with mods incorporating nudity into the game, and culminates with mods in the realm of hardcore pornography. Such mods are not permitted on Steam Workshop or through Bethesda's own mod distribution system, and there also is a degree of self-curating in the modding community. None of the large modding teams incorporate pornographic content into their projects, and Nexus Mods appears to be selective in the mods they distribute, albeit with no stated criteria<sup>49</sup>. Outright pornography is relegated to specialised, relatively low-profile sites like Loverslab<sup>50</sup> (Majkowski, 2016).

The development tools released for *TES* games are accompanied with a license agreement forbidding users from selling their products, as well as granting Bethesda Softworks the unlimited right to distribute user-produced content without any control from the mod developer. While sales are illegal, some sites, including Nexus Mods, provide their users with an option to donate money to modders. In 2015, Bethesda introduced an option for players to sell mods through Steam Workshop but intense community backlash forced the company to backtrack (Bethesda Game Studios, 2015). In 2017, Bethesda introduced a new Creation Club system to *Skyrim* and *Fallout 4* (2015) where developers or modders can apply to directly collaborate with Bethesda on paid content. However, the system is designed for narrow, curated collaboration on new content rather than monetisation of existing mods (Bethesda Softworks, 2017). Even so, the Creation Club has not met with fan approval (Wright, 2017).

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<sup>48</sup> No previous *TES* game before *Skyrim* supported modding for consoles.

<sup>49</sup> Or perhaps the modders themselves are selective in what mods they upload to Nexus? Given the license agreement accompanying the editing tools, players have a reason to maintain a low profile on controversial mods.

<sup>50</sup> Link intentionally not provided.

Overall, a small, but significant number of modders provide content for *TES* games, typically concentrating on the most recent game. The modders are organised around several PAS-like sites, but their modus operandi requires deeper analysis. The modding community appears to be confident enough in their familiarity with the franchise to believe they can correct and improve upon the work of its creators, either in terms of fixing the game, or building 'lore-friendly' content enhancing authenticity of the existing world or expanding it. This level of confidence stems not only from the development skills the community has brought together, but also from the lore-related knowledge allowing projects ensure lore-friendliness. The growth in this area stems from the parallel and continuous expansion of the lore-oriented branch of player activities.

### 3.5.2 The lore PAS

Collaborative wiki-based websites changed the exploration of lore. The UESP transitioned into this model in 2005 (Unofficial Elder Scrolls Pages, 2012), while a rival wiki, The Elder Scrolls Wiki was launched in 2006 as part of the commercial Wikia portal affiliating diverse fan communities. Both wiki projects appear to function in much the same ways as described by Hunter (2011) in the context of *World of Warcraft* fandom, with new entries being subject to debate and scrutiny. While neither of the wikipediae has attained a scope of content to rival the WoWWiki, both have accumulated well over 50,000 entries<sup>51</sup>. Data collected by the online lore websites can come from three different types of sources; firstly, direct experience of the games and other *TES* products themselves, secondly, the official ancillary paratexts such as game guides, and thirdly, information extracted from the game databases using the editing tools. One typical example of how this form of data mining is used by the lore community is to collate the statistical data on the attributes of various game items, a perennial concern of RPG players seeking to optimise their game strategy, and which has traditionally been done by playing the games themselves (Squire, 2011). A different, more innovative example demonstrating player interest in the world itself rather than the gameplay, is an attempt to analyse the demographics of the game world by collecting information about all the characters inside *Morrowind*, *Oblivion*, and *Skyrim* (Figure 10).

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<sup>51</sup> As of October 5<sup>th</sup> 2017, the *UESP* stands at 53,010 articles, while the *TES* Wiki stands at 54,848.

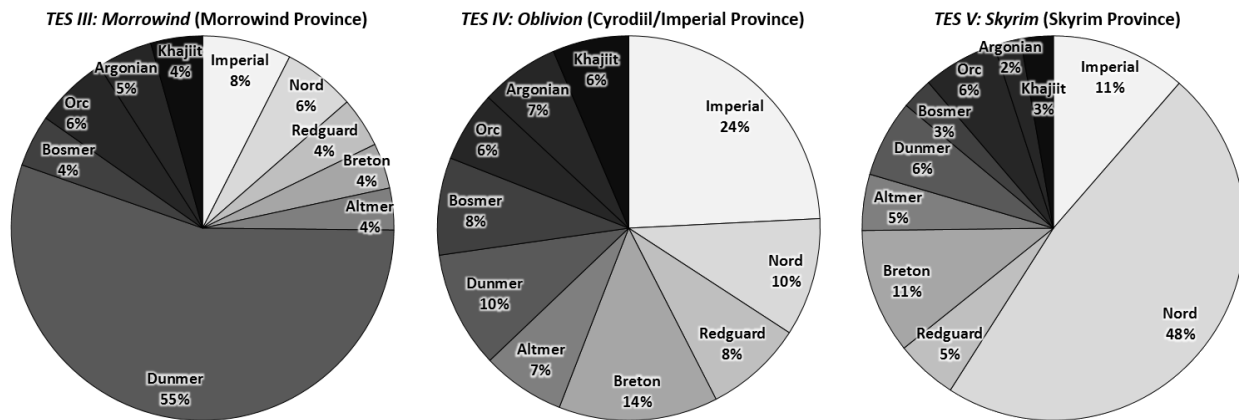


Figure 10 Ethnic groups in Morrowind, Oblivion, and Skyrim (The Unofficial Elder Scrolls Pages, 2015a)

The volume of data accumulated by the *UESP* and *TES Wiki* indicates these two wikipedic sites have become central and dominant in the *TES* fandom's lore-gathering & analytical efforts. The collaborative nature of the wiki technology means each of these sites is a PAS by Gee's (Gee, 2013) definition. However, while their technology facilitates unlimited participation, the number of active users is low. The *UESP* reports approximately 81,900 registered members (Unofficial Elder Scrolls Pages, n.d.), but of those registered members, at present only around 140-150 are active in recent 30-day periods<sup>52</sup>. While page edits can also be conducted by anonymous users who did not register an account, the active component of the community is evidently narrow. As with modding, most *TES* fans limit their lore engagement to consumption.

Although the wikipedic efforts have largely superseded individual-driven websites, The Imperial Library<sup>53</sup> continues to function as a smaller, team-based effort. TIL as a site is in some ways inspired by *TES'* diegetic mode of lore delivery. Apart from collating lore, the site archives interviews with developers (cf. Sinder Velvin, 2008); some of these interviews were conducted 'in character', a role-playing scenario where both the interviewing fan and the interviewed developer pose as characters from the diegesis (e.g. Xanathar, 2010).

### 3.5.3 Beyond the virtual: fan activities outside of the digital realm

While the realm of physical artefact production by players is beyond the scope of this research, it needs to be briefly signalled as another indicator of the richness of players activities. The production of physical artefacts shows *TES* does have fans in the cultural studies understanding of the concept

<sup>52</sup> Data checked on October 5<sup>th</sup> 2017 and December 25<sup>th</sup> 2017.

<sup>53</sup> <http://www.imperial-library.info/>

(Jenkins, 1992), rather than just power gamers dedicated to gaining an advantage in the game (Wirman, 2007). There is no game advantage to be gained from crafting a leather-bound book or a suit of armour.

A typical form of book production involves creating physical compilations of the diegetic books from particular games, namely *Oblivion* (Peckham, 2011) and *Skyrim* (jennybean42, 2012). In another case, a fan concentrated on the outward appearance several diegetic books as artefacts or, ignoring their content and instead faithfully re-creating physically of the virtual books as they appear *Skyrim* (Gallacher, 2013); given the attention paid to using materials with an appropriate tactile texture, these re-creations can best be described as fan-produced feelies (Karhulahti, 2012).

Beyond books, there are numerous examples of *Skyrim* fans producing costumes imitating clothing, armour, weapons and other equipment from the game (e.g. VerbalProcessing, 2013). Costumes are produced to be worn<sup>54</sup> at various fantasy-related fan conventions as part of the broader cosplay phenomenon going back to the *Star Trek* fandom of the 1980s (Jenkins, 1992). In the digital era where YouTube allows video producers to monetise their output, costumes are also used extensively in fan video productions, most commonly parodies (e.g. Nedopak, 2012). Fully costumed narrative fan films also exist, for example *Shattered Shield* (Node Studios, 2013). Even the act of producing a costume can be a YouTube video (e.g. Waffles, 2016). YouTube videos are also used to re-create intangible content from *Skyrim*. A famous example of this is the young Mexican singer-composer Judith de los Santos, known online as Malukah, whose rendition of the song *The Dragonborn Comes* from *Skyrim*, produced less than three weeks after the game itself, has been watched over 20 million times (Malukah, 2011). Malukah would later contribute the end credits song, *Beauty of Dawn*, to *The Elder Scrolls Online*, making a co-creative (Banks, 2013) transition from fan to contributor.

Many other categories of fan-produced YouTube videos exist, including reviews of mods, presentations and discussions of lore, discussions around game strategy, and games criticism (e.g. Keddie, 2014). The entire range of fan video productions has so far only been examined to a limited degree by Puente and Tosca (2013), and warrants deeper analysis. However, all the YouTube videos cited here and likely most YouTube videos around video games in general, blur the line between fan activities and small-scale commercial enterprise. It is not only the matter of monetisation, but also of motives; for example, the producers of *Shattered Shield* (Node Studios, 2013) have published many game-related videos that neither begun with, nor concentrate on *TES*. It is impossible to tell if *Shattered Shield* is an expression of fandom, or a calculated production decision aimed at monetising the popularity of *Skyrim*. Even raising

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<sup>54</sup> Some of these costumes are produced for sale. However, assessing the degree to which costume production is a commercial activity is beyond the scope here.

this question seems to presume fan activities are purer when devoid of financial motivations. It would be tempting to dismiss such concerns as the unnecessary consequence of earlier cultural studies works presenting a romantic image of fans ‘poaching’ from large commercial entities (e.g. Jenkins, 1992) and the broader problem of cultural studies relying on the ideological tradition of cultural Marxism (Barker, 2012). This tradition, which sees unpaid fan labour as a form of exploitation and frequently presents the relations between fans and corporations as antagonistic (Terranova, 2013), may lead to the idealisation of the ‘pure’ fan with no interest in money. Such views, are arguably untenable in the context of participatory culture (Jenkins, 2006). However, as the controversies around Bethesda’s attempts to empower modders to monetise their mods indicate, many fans believe monetisation runs against the community’s values. Questions around commercialisation are beyond the scope of this research, except insofar as they impact player motives for PAS participation.

### 3.6 Combined literature review conclusion

The two chapters of the literature review investigated firstly the confluence of game studies and heritage, followed by an examination of *The Elder Scrolls* series, the literature around it, and the activities of its audience. The combined literature review has highlighted three areas in need of investigation in the context of understanding the potential role of RPG games in transmitting Indigenous CH. These areas are, world-building in RPGs, RPG audience PAS participation, and the challenges of collaboration with indigenous parties on Indigenous culture.

There are indications RPGs may be good tools for the transmission of CH. Nonetheless, no RPG game has been subjected to a deep and systematic analysis. Even where an RPG game is the central point of investigation for an academic dissertation (e.g. Waggoner, 2007; Tanenbaum, 2008; Flarup, 2010; Garda, 2016; Pelkonen, 2016), these investigations concentrate on aspects of the games other than their worlds and cultural content. Studies discussing CH content in RPGs (e.g. Johnson, 2013; Granström, 2013) tend to be relatively shallow and limited in scope. Even when Granström (2013) recommends *Skyrim* as a reference for scholars seeking to enhance serious games with features from commercial games, it is not at all clear how the broad features identified by Granström translate into game characteristics, and how these characteristics emerge from the details of the game’s design. Similarly, Champion’s (2015) various proposals for the improvement of CH content in RPGs lack the context to be gained from a grounding in an in-depth study of current RPGs. An underlying problem is the general lack of understanding of how imaginary worlds are constructed in their virtualised form. Wolf’s (2012) pivotal study of subcreation only briefly discussed interactive and virtual imaginary worlds, while Champion (2015) mostly concentrated on the limits of RPGs rather than their strengths. From a heritage perspective, there is a

need for deeper understanding of the roles the diverse elements of *Skyrim*'s world play in conveying culture.

PAS participation also requires further investigation. Squire (2011) and Gee (2013) provide a valuable analysis of the general characteristics of affinity space participation, and there is substantial literature on MMORPG PAS activities, (e.g. Poor, 2014; 2015), some of which has implications for single-player RPGs (e.g. Wirman, 2007; Hunter, 2011; Squire, 2011). However, there is little research of PAS practices for single-player RPGs like *Skyrim*. For *TES*, the exceptions include Johnson's (2007) discussion of fan online writing practices for *Morrowind*, and Puente and Tosca's (2013) study of the *Skyrim* community's engagement with the production of YouTube videos. A smaller contribution was made by Hackman and Björkqvist's (2014) investigated the motivations of *Skyrim* modders, but this study was too small in scope and depth to produce any meaningful results. There are also many works about modding (e.g. Laukkanen, 2005; Gee, 2013) and its potential serious applications (e.g.; Bostan, 2005; Francis, 2011; Squire, 2011; Champion, 2012c;), but few detailed examinations of the practices and motivations of modders. There are also no examinations of how and why players engage in lore-related activities around *The Elder Scrolls*. The potential importance of these practices stems from the fact that, as Granström (2013) argues, imitating commercial practice is futile if commercial-level funding is unavailable for CH. Active collaboration with the fans may potentially reduce the size of this problem by increasing production capacity without a bigger budget (Majewski, 2017a), but a better understanding of fan practices and motivations is needed.

The final point of investigation is collaboration between Indigenous and non-indigenous parties for indigenous heritage. There are established cultural protocols in Australia to guide media productions involving Australian Aboriginal CH and/or collaboration with Australian Aboriginal individuals and communities, including film (Janke, 2009) and video games (Wyeld, et al., 2007; Leavy, 2014). However, the game-related protocols were designed for one project, and need to be interrogated to verify their applicability in a broader context. Questions also remain as to the strategic purpose and tactical objectives of employing video games for heritage. Of interest are the cultural priorities on indigenous-oriented projects, and the possibilities of PAS-based collaboration between projects and audiences, as well as more generally collaboration with indigenous communities.

### 3.7 Research questions

Each of the three identified areas of inquiry leads to a research question:

1. How is *Skyrim* constructed to enable players to experience tangible and intangible heritage in its environmental, social, and cultural aspects?

2. How and why do *Skyrim* players explore and popularise cultural heritage presented in RPG worlds through participation in online passionate affinity spaces?
3. What core game and project design features can be identified to support the dissemination of Indigenous cultural heritage in open-world RPG games, in terms of world-building, and in terms of supporting appropriate cultural management mechanisms and indigenous audience engagement?

These three questions require separate studies and methodologies. The next chapter presents an overview of the research methodology for the project.

# Chapter 4: Methodology



## 4 Methodology

The project is divided into three distinct studies, each addressing a different research question (RQ).

Figure 11 summarises the overall structure of the project, mapping each of the three studies to RQs, as well as the scholarly paradigms, data collection and analysis methods, and tools used.

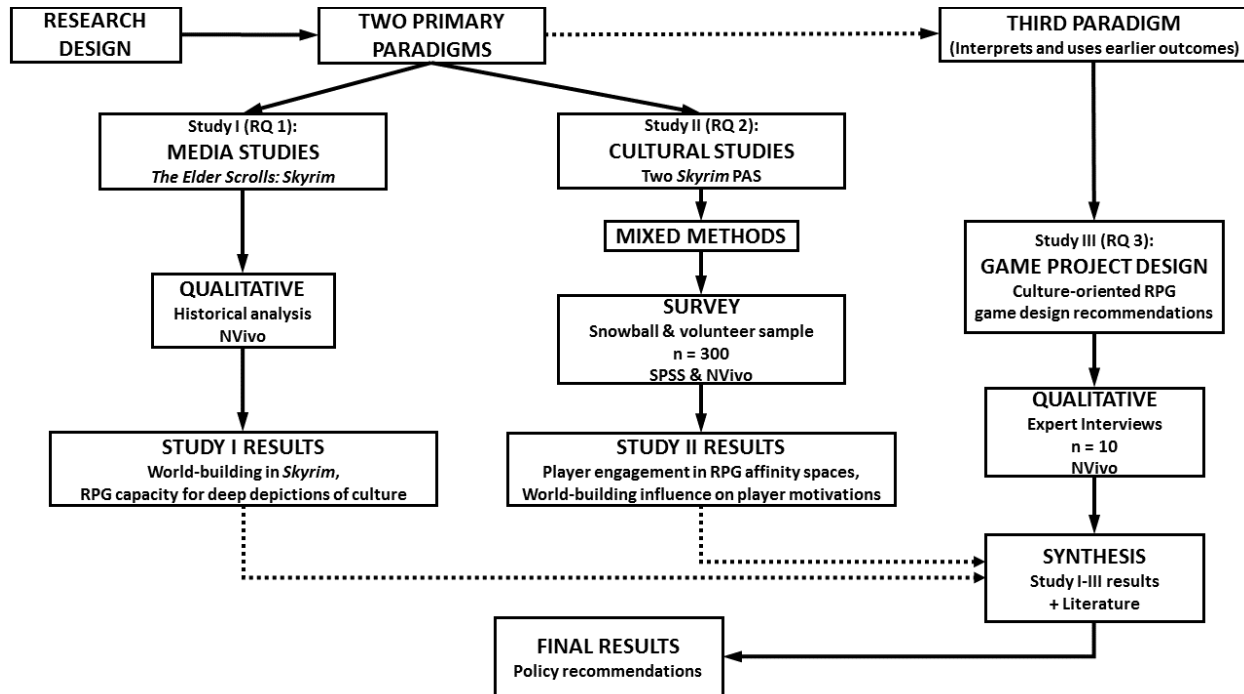


Figure 11 Research layout

Study one (media studies) employs immersive autoethnographic analysis (Cuttell, 2015) to investigate the depth of tangible and intangible heritage in *Skyrim*. At the core of the immersive method is the understanding games must be experienced directly to be analysed, with the author recording the play experience in the form of an autoethnographic research journal. The journal is used as primary data for a triangular analysis combining the author's subjective gameplay experience with game guides and other literature sources for a layered account of the game aspects under scrutiny. In this case, the aspects under investigation are the tools, methods and strategies employed by *Skyrim* to convey world-building information in the three interconnected aspects of the game world: the environmental, social and cultural.

The objective of study one is not an analysis of *Skyrim* as a game, nor of the world of *The Elder Scrolls* for its own sake. The purpose of the analysis is to interrogate the world-building methods and their limits in *Skyrim* to develop an understanding of how these methods can be applied to cultural heritage virtual worlds and games. An understanding of world-building methods in *Skyrim* will also be beneficial in the

context of imaginary world studies, where virtual manifestations of imaginary worlds remain underexplored.

Study two (social science paradigm) uses mixed methods to investigate *Skyrim* players and the activities they participate in. An international online survey (Nardi, 2014) is used here to analyse the degree to which players participate in heritage-oriented activities within the passionate affinity space through either knowledge-oriented or production-oriented practices. The data collected is quantitative, with some qualitative data serving an ancillary role. By developing an understanding of *Skyrim*'s active audience and the broader *TES PAS* community, data is obtained for an examination of the role active audiences can play in cultural heritage RPGs.

Study three (game project design paradigm) aims at producing a set of design and project methodology guidelines and recommendations for the development of open-world RPGs exploring CH. The core of this study is a set of in-depth qualitative interviews with experts (Wang & Yan, 2014), intended to map the priorities and needs specific to Indigenous Australian CH. Interviews focus on issues of subject choice, practical implementation, process ownership and cross-cultural collaboration. This data is then synthesised with findings from earlier studies to develop a set of design and policy recommendations for the transmission of Indigenous Australian CH through RPGs.

The three studies employ both quantitative and qualitative methods. In media and social studies, quantitative methods are used to build a set of statistics defining the range and frequency of occurrence for chosen content items in the unit of analysis, while qualitative methods seeks to evaluate, explicate and interpret data, to build a narrative (Berger, 2014), and generally identify a deeper meaning of the data (Priest, 2010). Within both types of research, diverse methodologies are available, and some methodologies can be applied both quantitatively and qualitatively depending on the details of the researcher's approach. Qualitative content analysis can vary greatly depending on the method chosen, and the theoretical or ideological framework adopted by the researcher (Brennan, 2013). It is also common to combine both qualitative and quantitative approaches into mixed methods, resulting in potentially deeper, but more complex studies where multiple methods allow for triangulation to better support the conclusions from different perspectives (Priest, 2010). In this project, the first and third studies are purely qualitative, while the second study is primarily quantitative, but incorporates qualitative elements.

#### 4.1 Study one: cultural content in the open-world RPG

The first research question (RQ1) asks how *Skyrim* is constructed to enable players to experience tangible and intangible heritage across social, cultural and environmental aspects of the game world.

While the most typical methods employed in media studies to examine the contents of a media text are content analysis and textual analysis (Berger, 2014), the somewhat atypical immersive method (Cuttell, 2015) was chosen for the examination of *Skyrim*. To explain the method and justify its choice, the challenges of analysing a game world of the size and scope of *Skyrim* are addressed.

#### 4.1.1 The challenge of analysing game worlds

In examining the concept of imaginary worlds, Chapter 2 found such worlds must be approached through the windows offered by media texts exploring the world in question (Wolf, 2012); it is thus natural to resort to methodologies from media studies such as content analysis and textual analysis. While content analysis is used, typically in the quantitative form, to examine a text's manifest content and meanings, textual analysis is always qualitative, and can be employed to provide a holistic understanding of the text by examining both the manifest and latent meanings and how they come together to build the text (Weerakkody, 2009; Berger, 2014).

Textual analysis is problematic for video games because understanding a media text requires experiencing as much of it as possible, but video games, in their nature as ergodic, or work-demanding texts, are designed to actively frustrate the players in their efforts to traverse the game (Aarseth, 1997). The video game enables divergent readings of the same text, a problem prominent in open-world RPGs; Aarseth (2003) points to *Morrowind* as an example of such divergences. When attempting to analyse a game through textual analysis, the problem of divergences may be alleviated by employing the close reading method, in which a text is read repeatedly until no further meaning can be derived. An example of this method can be found in Tanenbaum's (2008) analysis of the player character generation process in *Oblivion*. However, for an open-world RPG with 300 hours or more of gameplay, where some quest lines are mutually exclusive and experiencing the whole game demands multiple replays of lengthy segments of the game (Hodgson, Stratton, & Cornett, 2013), close reading is only viable if the unit of analysis is limited to one small part of the game as done by Tanenbaum (2008), whose lengthy study concentrated on a section of *Oblivion* players would normally complete in a few minutes.

Another common research methodology used in media studies to compare multiple texts or to examine one text in detail is content analysis. The unit of analysis may be either a complete text, or a selected part of it, for example the first twenty minutes of a film. The analysis may be either qualitative or quantitative (Berger, 2014), concentrating on manifest content (Weerakkody, 2009). In game studies, content analysis has been employed to investigate violent content and depictions of gender (Dietz, 1998), or ethnicity (Brand, Majewski, & Knight, 2006). A more game world-oriented content analytical investigation may be found in Brand, Knight and Majewski (2003), where quantitative analysis was used

to build an overview of the diversity of locations and characters across 130 games. Due to its breadth, this study was limited in depth, with the unit of analysis being the first ten minutes of gameplay for each game. When examining a single game, the content of the game may be examined in greater depth if qualitative methods are employed (e.g. Berger, 2002). In such cases, multiple methods and angles of media analysis can be combined into a more complex examination called a case study. By employing case studies, Berger (2002) converged on his chosen game texts from the perspective of more than one of Berger's (2002, 2014) four focal points of the text, its authors, audience, and the society. Case studies, however, are an even more intensive method of analysis, posing a challenge for large and complex texts.

Media studies methods concentrate on the act of experiencing the text through its content. In this case, however, the study focuses not on the content, but on the world-building methods and tools used to construct the content. There is little to draw on for methodology to examine the methods and tools used to put the text together. A review of other game studies methodologies shows they mostly concentrate on analyses of gameplay or the experience of playing the game (e.g. Bayliss, 2005; Consalvo & Dutton, 2006; Lankoski & Björk, 2015), and therefore do not enable an analysis of the game world and world-building methods.

Given the author's background as a game designer with more than a decade of industry experience, it would be reasonable to look to game design-based methods of content analysis. However, while game designers do commonly analyse other game features, such design analyses do not normally involve a detailed methodology. Game design books (e.g. Schell, 2015) suggest looking at other games, but they do not provide a methodology or framework to do so.

A difference between industry analysis and typical scholarly approaches to game content analysis is that the former are willing to approach the game using any means available at their disposal, while the latter tend to emphasise direct experience of the game and remain ambivalent about the role auxiliary sources play in game analysis. Thus, while Aarseth (2003) acknowledges the potential value of obtaining supporting information outside of the game, he also regrets some scholars resort to studying the game using game guide information or cheat codes. In contrast, game developers can and do employ game guides, cheat codes, mine data from the game's internal databases, and even reverse-engineer the game<sup>55</sup>. There is also an extensive history of data mining among game players to obtain information about game contents (Newman, 2008).

There are few examples of scholarly works examining game worlds and world-building in games. Such works (e.g. Wolf, 2011) provide little methodology, suggesting a fluid approach where analysis of game

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<sup>55</sup> This paragraph draws from the author's direct experience of the games industry.

content merges with historiography of the game franchise and its broader context. The nuances of the methodologies used by the game to communicate its world to the player are largely ignored.

Overall, while qualitative content analysis is an appropriate method to employ for this study, there was no specific form of qualitative content analysis to be found in the literature to accomplish the author's objectives. Industry game design analysis practices lack the structure and robustness of academic methods. An interesting solution to this problem emerged from the field of anthropology and ethnography.

#### 4.1.2 Anthropology, ethnography, and the immersive method

Anthropology and ethnography study human cultures and behaviours. Within these fields, especially relevant are efforts to study groups of people, their behaviours, routines, and culture while embedded inside them for close observation. While even Herodotus presumably used such methods more than two millennia ago (DeWalt & DeWalt, 2011), the theoretical methodological principles for what is called participant observation were first established just over a century ago by the Polish anthropologist Bronisław Malinowski, who documented the processes he himself employed in his anthropological fieldwork.

With the advent of virtual worlds and virtual culture, a fruitful engagement emerged between anthropology, ethnography and video game studies. This engagement emerged from a desire to examine the anthropological and cultural phenomena of massively multiplayer virtual worlds (Taylor, 2006). Autoethnography has been used to examine the played experience of individual players and their relations with their avatars (Pearce & Artemesia, 2009), while ethnography has been employed to examine the broader community interactions and the resulting online cultures (Taylor, 2006; Boellstorff, 2008; Boellstorff, Nardi, Pearce, & Taylor, 2012; Johnson, 2013). Game designers have noted the value of applying anthropological approaches to games, with Bartle (2004) stressing the importance of MMO designers understanding the mechanics of relations between individual players and communities. Anthropology also provides a methodology to examine the relationships between human players and the virtual worlds and landscapes they inhabit (e.g. Frömming, 2013).

While game ethnography has primarily concentrated on multiplayer environments, it can be applied to examine virtual environments and cultures in single-player RPGs. Miller (2008) applies autoethnography in a study of the player experiences as a form of virtual tourism in *Grand Theft Auto: San Andreas* (2004), tapping into a longer discussion on the similarities between travel writing and the way players experience virtual worlds (Fuller & Jenkins, 1995). Through autoethnography, the field of ethnography

provides a method facilitating the systematic recording of the played experience of the game while retaining a reflexive awareness of the player-researcher's own subjectivity (Brown, 2015; Cuttell, 2015).

Autoethnography has primarily been used for the purpose of examining a game through the prism of the player's own subjective reactions (e.g. Miller, 2008; Borchard, 2015; Cuttell, 2015). The autoethnographic method thus allows the player-researcher to observe and acknowledge the relationship between the game developers and the player, which occurs through the proxy of the game and the expectations of player behaviour the game imparts (Aarseth, 2007b). The autoethnographic account is then combined with other methods of analysis, such as qualitative content analysis or textual analysis, into what Cuttell (2015) calls the immersive method: the researcher immerses in the game, recording observations in an immersive research journal, and subsequently analysing this journal alongside other sources to produce a layered account of the game experience. The immersive method provides a structure for a systematic analysis of the game world and the tools and methods the game employs to present it to the player.

#### 4.1.3 The immersive method in practice

While the immersive method presented and Cuttell (2015) provided an potential approach for the present study, her focus, as in the earlier autoethnographic study by Miller (2008), has been on the player experience. The reviewed literature did not yield examples of the method being applied to the study of a game world as opposed to a game experience. Consequently, detailed guidelines needed to be developed for this purpose.

To gain an understanding of the game as a world-building system, extensive familiarity with the game and the game world are required, and this may be achieved through playful immersion in the game documented in the researcher's immersive research journal. The importance of play in the research process has been emphasised by game scholars (Aarseth, 2003; Mäyrä, 2008) and is largely unquestioned, but the term 'play' itself can be problematic due to its connotations as a leisurely activity<sup>56</sup>. To avoid these connotations, the play process could be described as reading the game text, but this obscures the nature of investigating a game text. Reading implies a linear process with a set entry and end point, and while some literary texts can be referred to as difficult (Aarseth, 1997), their difficulty typically lies in comprehension, not the mechanical process of reading through the text. This makes player failure, so pervasive to the game experience (Juul, 2013) difficult to explain in the context of reading.

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<sup>56</sup> Even in the context of this study, the author had been encouraged by colleagues to avoid referring to time spent playing *Skyrim* in progress reports, and to instead refer to reading or analysis.

Play can involve or even demand failure as part of the learning process of gaining mastery over the game (Mäyrä, 2008). Play can be circular, tolerating repetition, and inviting experimentation. While some scholars have justified repetition and experimentation in the reading process by invoking the concept of close reading (Tanenbaum, 2008), repetitive close reading is dissimilar to play because it remains relatively rigidly structured. A consciously playful attitude towards the game text, meanwhile, empowers the game researcher to creatively improvise, to investigate different approaches, and experience the outcomes of using different affordances provided in the game, resulting in a deeper understanding of the game.

Achieving an understanding of the game world and the tools used to construct it, does not require the researcher to play through the entire game, particularly given the difficulties of playing and documenting gameplay for extended lengths of time. It seems impossible to generalise how much play time is enough, as this depends on the structure of the game in question; it is therefore important the researcher is familiar with the game before the study begins, so correct parameters can be set.

In this case, based on the researcher's experience with the *TES* series (Table 4), the amount of direct play required was estimated as 10-20 hours. This timespan may seem short for *Skyrim*; however, *Skyrim* as a whole is not under scrutiny, only its world-building methods. These methods would be relatively repetitive across the geography of the world and the chronology of the narrative(s), as can be seen from a cursory analysis of the game guide (Hodgson, Stratton, & Cornett, 2013).

Year released	Product name	Year first played	Approx. total gameplay time	Additional resources available
1994	<i>The Elder Scrolls: Arena</i>	1995	50 hours	Game manual, UESP, TES Wiki, game guide.
1996	<i>The Elder Scrolls II: Daggerfall</i>	2008	Less than 10 hours	Game manual, UESP, TES Wiki, game guide.
1997	<i>An Elder Scrolls Legend: Battlespire</i>	N/A	N/A	Game manual, UESP, TES Wiki.
1998	<i>The Elder Scrolls Adventures: Redguard</i>	N/A	N/A	Game manual, UESP, TES Wiki.
2002	<i>The Elder Scrolls III: Morrowind</i>	2003	700-1000 hours	Game manual, UESP, TES Wiki, game guide, game editor.
2003	<i>The Elder Scrolls Travels: Stormhold</i>	N/A	N/A	Game manual, UESP, TES Wiki.
2004	<i>The Elder Scrolls Travels: Dawnstar</i>	N/A	N/A	Game manual, UESP, TES Wiki.
2004	<i>The Elder Scrolls Travels: Shadowkey</i>	N/A	N/A	Game manual, UESP, TES Wiki.
2006	<i>The Elder Scrolls IV: Oblivion</i>	2006	300-400 hours	Game manual, UESP, TES Wiki, game guide, game editor.
2006	<i>The Elder Scrolls Travels: Oblivion</i>	N/A	N/A	UESP, TES Wiki.
2009	<i>The Infernal City</i>	2015	(read)	UESP, TES Wiki.
2011	<i>Lord of Souls</i>	2015	(read)	UESP, TES Wiki.
2011	<i>The Elder Scrolls V: Skyrim</i>	2011	350 hours	Game manual, UESP, TES Wiki, game guide, game editor.
2014	<i>The Elder Scrolls Online: Tamriel Unlimited</i>	N/A	N/A	Game manual, UESP, TES Wiki.
2016 (re-release)	<i>The Elder Scrolls V: Skyrim – Special Edition</i>	2017	Less than 10 hours	Game manual, UESP, TES Wiki, game guide, game editor.
2017	<i>The Elder Scrolls: Legends</i>	N/A	N/A	UESP, TES Wiki.

Table 4 Author engagement with *TES* series

Given the objective of the study and the nature of the open-world RPG, it is important to freely explore the game world beyond the main story of the game. The focus on world-building makes it paradoxically less important to describe the entire main story than to observe the other affordances of the game world. The concept of saturation employed in qualitative interviews (Creswell, 2014) serves as a useful analogy here; in the same way additional interviews on a given subject yield progressively less new data until a point is reached where further interviews provide less data than is required to justify the effort involved, so a point is reached in the game where additional play time will no longer provide sufficient new information on world-building tools to justify further play. Because the opening section of any game is used to teach players about the game's affordances (Schell, 2015), it is this part of the game that would offer the most insight into the range of world-building tools; consequently, the unit of analysis for the immersive research was defined as at least the first ten hours of the game, with the possibility of extension as needed until the researcher would judge to have reached the point of saturation.

The researcher used the research journal to describe the encountered events, characters, and locations, gameplay mechanics and player decisions. The focus on world-building methodology determined the amount of attention any encounter warranted in the journal. First encounters were privileged with more extensive description; a second visit to the same location would be more sparingly described. Dungeon gameplay and combat descriptions were brief due to their relatively low world-building impact. Apart from describing on-screen events, the researcher also noted down general thoughts and observations associated with on-screen action.

Apart from documenting the researcher's time immersed in the game, the purpose of the research journal is also to render visible the researcher's subjective perspective on the game (Cuttell, 2015). Consequently, the researcher decided to preface the research journal with an autoethnographic account of the researcher's history of engagement with the series, and the broader context of this history.

Additional resources available for *TES* (Table 4) and include game paratexts, official game guides<sup>57</sup>, and unofficial game resources developed by the players, the UESP and TES Wiki. These resources provide empirical data cataloguing the content of the game world. *Skyrim's* editing tool, the *Creation Kit*, is also available, and could be used to glean insight into details of the game rules; however, this role was expected to be minimal, given the game's already extensive documentation.

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<sup>57</sup> The game guides listed in the table are as follows: *Arena* (Weller & Peterson, 1994), *Daggerfall* (Wartow, 1996), *Morrowind* (Olafson, 2003), *Oblivion* (Olafson, 2007), and *Skyrim* (Hodgson, Stratton, & Cornett, 2013).



In this study, the design features under investigation are the characteristics and elements of *Skyrim*'s world-building process. These characteristics and elements include game features serving as tools and methods employed in *Skyrim* to build up a convincing virtual world, as well as the strategies employed to maximise the impact of these tools and methods. The world-building elements are divided into the three types of presence elucidated by Champion (2007; 2015), namely social presence, cultural presence, and environmental presence.

Finally, the immersive research documented in the research journal does not exhaust the researcher's ongoing engagement with the series. During the project, the researcher had constant access to all the main *TES* games, and would regularly access them to verify gameplay details.

Overall, the first study collected data in the form of a research journal documenting the immersive research of playing through the first ten or more hours of *Skyrim* until the point of saturation was reached on the collection of information pertinent to world-building. NVivo 11 was used for the subsequent analysis of the collected data, to highlight world-building tools, methods and strategies identifiable from the research journal. Subsequently, this data was triangulated with the scholarly literature on *TES*, and with the paratextual and player-produced resources that empirically document the contents of *Skyrim* and the *TES* series. The triangulation process allowed the findings from the documented segment of the game to be examined against the backdrop of the entire game, to extrapolate the role specific world-building tools played in the sections of the game not documented in the research journal, producing a response to RQ1: How is *Skyrim* constructed to enable players to experience tangible and intangible heritage in its social, cultural, and environmental components? These findings are documented in Chapter 5.

## 4.2 Study two: player engagement through the passionate affinity space

The second research question (RQ2) examined how and why *Skyrim* players explore and popularise culture presented in RPG worlds through participation in online PAS. To respond to this question, an international anonymous online survey of *TES* players was deployed within a social science research framework.

The survey targeted two *TES* PAS sites. The first was the online wikipedia website The Unofficial Elder Scrolls Pages (UESP) which concentrated on the aggregation and analysis of game lore. The second was the modding aggregation website Nexus Mods, where *TES* modders publish their work. However, the total target population was the entire online *TES* community, with the two specific PAS sites serving more as research sites than as sample groups. The two sites were chosen based on their prominent role in the *TES* community. The UESP is the older of the two *TES* wikis, and appears to have a stronger

position in the community than the TES Wiki (MCWyss, 2015). In turn, Nexus Mods appears to be the most prominent *Skyrim* mod repository, hosting many more *Skyrim* mods than the Steam Workshop environment directly tied to the game's release platform<sup>58</sup>. Although Nexus is a broader entity supporting multiple modding communities for different games, each community has its own dedicated sub-section with its own internal forum, allowing the community in question to be reached independently of other modding groups.

The survey aimed to reach a volunteer snowball sample, where initial volunteer respondents are encouraged to inform others about the survey (Nardi, 2014). The target sample size was set at  $n=1,000$ . The survey was deployed using the online platform Qualtrics. Participant consent was secured by an explanatory statement posted at the online forums belong to the two targeted communities. Participants were also encouraged to notify other community members about the survey. Prior to deployment the website administrators were contacted by email and forum private message systems, asking them for permission and requesting, if possible, publication of information about the survey on their front pages.

Surveys are used when collecting data about, and soliciting the opinions of, a group of people too large to engage in more direct ways (Babbie, 2013), and appeared to be the most appropriate method for investigating the *TES* player community. There is an established history of surveys for audience research in both media studies (Bertrand & Hughes, 2005; Berger, 2014) and social science (Babbie, 2013) paradigms. Surveys have been employed in game studies research for game-related studies situated in the social sciences (Mäyrä, 2008).

Johnson (2013) describes an earlier survey conducted on *Skyrim* players using a similar methodology as part of a broader ethnographic study. The 11-question survey was successful in collecting 333 responses over a five-day period. The data obtained indicated the sample was probably roughly representative of *Skyrim*'s general playing population as Johnson intended. However, the volunteer sample was likely to have come from a small range of sites, so the data could not be generalised out to the entire *Skyrim* audience. Based on Johnson's experiences and given the variables involved in the deployment of online surveys through community sites, the possibility of reaching a truly random and representative sample was not seen as viable. The survey could be expected to produce responses from the most engaged members of the community, as they would be most willing to respond to questions. This limitation did not affect the utility of the research, as it has been established only a small segment of the

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<sup>58</sup> As of 21/10/2017 Nexus had 54,703 mods, greatly surpassing Steam, which has not reached 30,000 mods for *Skyrim*.

audience ever engages in creative practices in the affinity space in general (Gee, 2013), and Chapter 3 indicated this was true for *TES* players.

Gee (2013) argues different affinity spaces within the same fandom can differ in culture and interests. It was expected differences in player motivations and activities would emerge from a comparison of the two spaces under examination, one representing efforts to collect, analyse and disseminate lore, the other focusing on content production.

The interest of players in the world, as opposed to the game, may reveal divergence in motivations between players. Although inconclusive, studies of player engagement with virtual online worlds such as *World of Warcraft* have hinted most players who engage in *WoW* are not interested in the world's lore (Calleja, 2011); rather, their interest lies in understanding the best strategies to negotiate the game (Wirman, 2007; Squire, 2011). Initial examination of *TES* players in Chapter 3 suggests this community goes beyond strategic approaches to lore, but it remained unclear how much the participants of lore-based affinity spaces were interested in *TES* lore for its own sake, outside of game strategy concerns. Likewise, engagement in content production may be an indication of interest in the game world, but it can be simply an avenue of expression, and occasionally an avenue of expression of other affinities (Wirman, 2007). The survey therefore aimed to indicate the degree to which *The Elder Scrolls* inspire affinity space participation for the sake of the game world, as opposed to other motivations.

This sample size was chosen to ensure sufficient variability in the data to justify the developer guidelines anticipated to emerge from the research. A relatively large sample size was desirable given some of the questions involved provide numerous response options, and a smaller sample would potentially have difficulty capturing the variability within these responses. However, it was also considered n=1000 responses would be more than may be obtained from the two communities through a voluntary online survey. Available data indicates no more than 126,000 total lifetime members across both communities,<sup>59</sup> of whom only some would be active given the elastic nature of such communities (Gee, 2013). For this reason, potential secondary target communities were identified in advance, to be used if the obtained responses proved insufficient. Nonetheless, the sample was not intended to be representative, and non-random snowball samples tend to show commonalities due to connections among members (Nardi, 2014). Consequently, receiving fewer responses was not considered a problem,

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<sup>59</sup> The UESP had ~76,000 registered members as of March 2017. Nexus Mods does not provide membership data, but the number of mods made available at the website is ~55,000, and while some mods are likely to be developed by teams, most mods appear to be the work of individuals, so the total number of active modders is not likely to exceed total number of mods. Given the overlap between the two groups, and the fact that many modders produce multiple mods, the total number of lifetime members in both communities is likely to be substantially lower than 126,000.

because the responses obtained would still illustrate the views of the most active segment of the communities and provide a basic profile of who belongs to this segment.

The target group was expected to be demographically diverse. While the game's age classification (15-18+ in most countries) allows the possibility of minors playing the game, including minors in an anonymous online survey is problematic due to the impossibility of obtaining prior parent/guardian approval (National Health and Medical Research Council, 2007). Consequently, the survey excluded minors by the means of an initial gatekeeper question about age.

The survey questions were designed to obtain information about the respondents' playing habits, motivations for playing the game and participating in the affinity space, and the nature of their participation. The data collected through the survey was mainly quantitative, in the form of multiple-choice questions, with a small amount of qualitative data emerging from a limited pool of short-answer questions. Quantitative data is analysed using SPSS Statistics 24, while NVivo 11 is used for qualitative data analysis. There were no complex statistical tests involved, as the study aimed only to build a snapshot of the surveyed communities through qualitative analysis of the quantitative data. The survey form (Appendix D), was divided into four sections, including demography, history, lore, and modding. Demography and history were addressed to all participants, while lore and modding sections targeted lore-based or modding PAS participants respectively. While the full survey was expected to take approximately 15-25 minutes to fill out, median completion time was 9 minutes, because only participants who reported engagement in both PAS groups answered the full set of questions.

The research question was divided into 13 subcomponents. Each RQ2 subcomponent was addressed by multiple survey questions (Table 5).

	RQ2 Component	Survey Questions
<b>Who are the participants of <i>Skyrim</i>'s online PAS?</b>	Q2_1: Are PAS participants demographically different compared to overall player demographics?  Q2_2: Are there any demographic differences between encyclopaedists (lore-based) and modders (modding-oriented)?	Dem_01-Dem_10  Dem_01-Dem_10, Mod_01, Lore_03
<b>Why do they participate in the PAS?</b>	Q2_3: Are encyclopaedists for single-player games like <i>Skyrim</i> more interested in the world's lore as opposed to gameplay than is indicated in studies of MMO games like <i>World of Warcraft</i> ?  Q2_4: Are modders motivated primarily by the possibility of extending <i>The Elder Scrolls</i> world, or the possibility of self-expression regardless of the game world?	Hist_05, Hist_11-12, Hist_15-Hist_17, Lore_15-Lore_16  Hist_05, Hist_11-12, Hist_15-Hist_17, Mod_14-19, Mod_25-Mod_31
<b>How do they perform their activities in the PAS?</b>	Q2_5: How do the encyclopaedists gather data? Q2_6: How do the encyclopaedists verify data? Q2_7: How do the encyclopaedists expand their engagement as they improve their abilities?  Q2_8: How do modders acquire their abilities? Q2_9: How do modders expand their engagement as they improve their abilities?  Q2_10: Do modders collaborate on group projects?	Lore_17-Lore_21 Lore_17-Lore_21 Lore_19-Lore_27  Mod_22-Mod_25 Mod_12-Mod_13, Mod_20-Mod_25 Mod_12-Mod_13, Mod_20-Mod_21
<b>To what degree is their engagement related to the game's cultural content rather than the game itself?</b>	Q2_11: Is there a relationship between long-lasting PAS involvement and higher levels of engagement with the game's cultural content?  Q2_12: Are there differences in cultural engagement between lore and mod-based PAS participants?  Q2_13: Is the production of controversial mods such as excessively sexualised companions a universal practice or can it be traced to particular segments of the modding PAS?	Dem_06-Dem_10, Lore_27, Mod_25-Mod_31  Dem_06-Dem_10, Lore_25-Lore_27, Mod_25-Mod_31  Mod_01-Mod_11
<b>General participant background</b>	(contextualisation for other questions only)	Hist_01-Hist_17 Lore_01-Lore_14 Mod_01-Mod_11

Table 5 The distribution of survey questions across RQ2 components

The overall outcome of this study responds to all three components of RQ2: How and why do *Skyrim* players explore and popularise culture presented in RPG worlds through participation in online passionate affinity spaces? These findings are documented in Chapter 6.

### 4.3 Study three: guidelines for an RPG exploring Indigenous Australian culture

The final research question (RQ3) seeks to identify the core game and project design features supporting the dissemination of indigenous CH in RPG games. For this purpose, additional insight was obtained from experts, including scholars and practitioners who are either already exploring similar projects, or are otherwise involved in related work and research in heritage and game studies. In-depth, semi-structured qualitative interviews were used.

Qualitative in-depth interviews employ open questions to elicit lengthy and detailed responses from participants (Wang & Yan, 2014), and are appropriate in situations where individual participants may be expected to offer substantial information beyond what could be obtained through a quantitative survey. Semi-structured interviews employ a loose structure further enhancing the depth of information to be obtained from individual respondents by augmenting pre-planned questions with dynamic prompts and probes. Respondents may be encouraged to go into further detail on an earlier response, or an additional line of inquiry may be followed up as it emerges (King & Horrocks, 2010). Because of their length and depth, in-depth interviews yield more information, but also require a much larger time and resource investment per participant than shorter forms of interview or quantitative surveys. Such an approach is appropriate when soliciting information from experts in the given field.

The specific cost of each interview is the time investment for transcription, as a 60-minute interview is estimated to take 4-8 hours to fully transcribe (King & Horrocks, 2010). Consequently, a typical sample for qualitative interview studies is between 5 and 25 people (Kvale & Brinkmann, 2009); the sample further varies depending on the exact nature of the research. The present study fits within the definition of phenomenological research methodology, where the typical interview sample needed to achieve saturation point is between 3 and 10 people; saturation point occurs when additional interviews no longer offer sufficient additional insight to justify the time and resource investment required (Creswell, 2014).

The qualitative interviews target scholars and practitioners from three fields. Cultural heritage includes scholars, museum employees, and practitioners from other organisations focusing on non-virtual forms of heritage. Virtual heritage includes scholars and practitioners with a track record of developed heritage applications or games. Finally, video games includes game scholars and game developers.

The study aimed for a total of 10 interviews. Experts were not recruited evenly across the three categories, as there was a degree of overlap in capacity, with some experts corresponding to two or all three categories. The chosen experts were identified during the literature review phase, and the interview protocol also provided opportunities for an additional snowball sample by asking interviewees

to suggest additional persons to enlist for interviews. These suggestions were used to ensure the total number of interviews remained close to the target if planned interviews proved impossible, and to ensure valuable interview subjects not previously identified by the researcher could still be included in the sample frame.

Because the study concerns indigenous CH, a strong representation of indigenous voices was a consideration in the choice of experts. Indigenous experts were not limited to Aboriginal Australians; while the focal point for this research was Aboriginal heritage, non-Australian indigenous voices provided additional experiences for comparison, as well as helping to broaden the applicability of the research. All contacted experts (Table 6) were adults who are known to media, government and industry.

Participant	Location	Indigenous?	Category	Participated?
1	Australia (NSW)	Yes (Aboriginal)	Heritage	Yes
2	Australia (QLD)	Yes (Aboriginal)	Heritage	Yes
3	Australia (VIC)	Yes (Aboriginal)	Heritage	No
4	Australia (NT)	No	Heritage	No
5	Australia (ACT)	No	Heritage	No
6	Australia (QLD)	Yes (Aboriginal)	Heritage	No
7	Papua New Guinea	Yes (PNG national)	Heritage	No
8	Poland	No	Heritage	Yes
9	USA	Yes (Native American)	Heritage	No
10	Australia (QLD)	Yes (Aboriginal)	Virtual heritage/Games	Yes
11	Australia (NSW)	No	Virtual heritage	Yes
12	Australia (ACT)	No	Virtual heritage	Yes
13	Switzerland / Australia (VIC/NSW)	No	Virtual heritage	No
14	Australia (NSW/NT)	No	Heritage/Virtual heritage	No
15	UK / Australia (WA)	No	Virtual heritage	Yes
16	Malaysia	No	Virtual heritage	No
17	New Zealand	No	Virtual heritage	No
18	USA	Yes (Native American)	Virtual heritage	No
19	USA	Yes (Native American)	Virtual heritage/Games	Yes
20	USA	Yes (Native American)	Virtual heritage/Games	Yes
21	USA	No	Games	No
22	USA	No	Games	Yes
23	USA	No	Games	Yes
24	USA	No	Games	Yes

Table 6 RQ3 interview participants

Participants were asked to fill out a consent form and read through a preparatory Participant Information Kit (Appendix F). Each participant was interviewed for approximately 60 minutes. Following the interview, a transcript was produced and presented to the participant to validate and ratify. Once the transcript had been approved by the participant, the data were analysed using NVivo 11 to identify themes, points of agreement and disagreement in the responses. By default, the interviews were conducted in confidence, so participants were only identified by role, with their views presented in a de-identified fashion. Conducting interviews in confidence ensures experts may safely broach sensitive topics, such as problems encountered in past projects. However, where a participant saw no need for confidence, they were prompted to inform the author at the transcript approval stage if they permit their names to be published.

Due to the global distribution of the interviewed experts, face-to-face interviews were not practical. Experts were contacted by email, while most interviews were conducted using Skype, a communications tool considered to be appropriate for remote research interviews (King & Horrocks, 2010). Experts in South-East Queensland, were interviewed face-to-face. All interviews were recorded with the participants' permission. Face-to-face interviews were recorded on camera with an iPhone 4 telephone serving for backup audio recording. For Skype interviews, Skype does not have a built-in recording capacity, but free third-party tools are available for recording. Initially, Free Video Recorder for Skype<sup>60</sup> was chosen, but this tool malfunctioned on first use, requiring the author to employ makeshift methods to record one interview. For this interview, only the participant's audio was recorded, with the interviewer's side reconstructed from the interview script. Subsequent interviews were recorded in audio-only format using MP3 Skype Recorder<sup>61</sup>. A useful feature of this tool is the splitting of the conversation into the left and right channels of a stereophonic audio file, with the outgoing voice saved in the left channel, while the incoming voice is saved in the right channel.

Following each interview, the audio was transcribed by the researcher. The only tool employed during transcription was the audio processing application GoldWave<sup>62</sup>, which visualises the audio wave shape, allowing the researcher to omit empty sections of audio. GoldWave facilitates the selection and repeated playback of parts of the audio, ensuring easy verification of the transcript. Transcription was generally literal, but pauses and connecting words were omitted from the transcript. Each transcript, once complete, was emailed to the participant for review and approval.

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<sup>60</sup> <https://www.dvdvideosoft.com/products/dvd/Free-Video-Call-Recorder-for-Skype.htm>

<sup>61</sup> <https://mp3skyperecorder.com/>

<sup>62</sup> <https://www.goldwave.com/>



The interview script was divided into three sections. The primer section probed the expert's initial views on heritage and games from the perspective of their professional experience. The games and culture section explored the challenges of transmitting culture through RPGs. The final set of questions concerned protocols and deployment as well as participatory player involvement through lore-related activities and modding. While the primer section served mainly to provide general background information, each of the remaining two sections corresponds to one of five subcomponents of RQ3 (Table 7).

	RQ3 Component	Interview Questions
<b>Primer</b>	Background & additional data	1-3
<b>World-building</b>	Q3_1: What strategies could world-building employ in situations where substantial cultural loss has occurred?	4-6
	Q3_2: What aspects of intangible indigenous cultural heritage are most important to disseminate?	7-8
	Q3_3: What aspects of indigenous natural heritage are most important to disseminate?	9
<b>Cultural management mechanisms</b>	Q3_4: In what ways would the protocol-based model of cultural management need to be adjusted to take into account the open nature of PAS engagement?	10-13
	Q3_5: What consideration needs to be given to limited technological access and digital literacy in some indigenous communities?	14

*Table 7 The distribution of interview questions across RQ3 components*

The overall result of the interviews, presented in Chapter 7, addressed a range of issues relating to RQ3, identifying core game and project design features to support the dissemination of indigenous CH in games both in terms of world-building and in terms of supporting audience engagement safeguarded by appropriate cultural management mechanisms. However, the response to this question remained incomplete without the three studies being synthesised into a unified set of design and project methodology guidelines for RPGs enabling players to explore Indigenous Australian culture and encouraging them to engage in learning both inside and outside the game. Although this synthesis formally remains a part of the third study, it is presented separately in Chapter 8, where the results of RQ1, RQ2, and RQ3 come together to respond to one overall question: How can open-world RPG games with their active audiences be best leveraged to transmit and preserve Aboriginal Australian cultural heritage?

#### 4.4 Conclusion

The present chapter outlined the three studies constituting this thesis. Each of the studies employed a distinct methodology to address a different research question. A qualitative study of world-building methods in *Skyrim*, employed immersive autoethnography. *Skyrim*'s audiences were analysed using a quantitative survey of two PAS sites. Finally, in-depth semi-structured expert interviews were used to solicit insight from experts across the fields of cultural heritage, virtual heritage, and video games. The subsequent three chapters report the outcomes of these studies.

# Chapter 5: A study of world- building in *Skyrim*

## 5 A study of world-building in *Skyrim*

The examination of *Skyrim* conducted for the first stage of the project was a qualitative study positioned in the framework of media studies. The immersive method (Cuttell, 2015) was used to address Research Question 1 (RQ1). This question was broken down into six sub-questions (Q1\_1 through to Q1\_6) as presented here.

1. How is *Skyrim* constructed to enable players to experience tangible and intangible heritage in its...

a. Environmental aspects?

Q1\_1: How does *Skyrim* depict its environmental world as a *static* entity?

Q1\_2: How does *Skyrim* simulate its environmental world as a *dynamic* entity?

b. Social aspects?

Q1\_3: How does *Skyrim* depict its social world as a *static* entity?

Q1\_4: How does *Skyrim* simulate its social world as a *dynamic* entity?

c. Cultural aspects?

Q1\_5: How does *Skyrim* depict its cultural world as a *static* entity?

Q1\_6: How does *Skyrim* simulate its cultural world as a *dynamic* entity?

The immersive method was employed as a conduit to structuralise the author's extensive experience with the game into a more rigorous and therefore replicable study. The author intended to play the first 10-20 hours of *Skyrim* while recording his experiences in an autoethnographic study journal, with the note-taking time included in the total time. This timeframe was estimated as adequate for the player to experience a sufficient part of the story and of the game world to observe most of the tools and strategies used for the purposes of world-building. The estimate was based on the author's knowledge of the game from more than 300 hours of gameplay experience outside of the study, combined with access to other materials such as the official game guides and the UESP. Further autoethnographic exploration of the game world would produce more knowledge about the game world, but not about the world-building methods, as most world elements, for example NPCs and landscapes, will likely serve similar world-building functions in different places. This study is not a deep examination of the game world of *Skyrim*: the total amount of game content experienced and recorded during data collection cannot be estimated precisely, but is only a small fraction of the game in every aspect – geography, narrative, population, cultural materials, dungeons, and so on.

The *Special Edition* of *Skyrim* released in 2016 was used. The choice of the *Special Edition* meant the downloadable content (DLC) packs, *Hearthfire*, *Dawnguard*, and *Dragonborn* were included in the game. *Dawnguard* and *Dragonborn* have no impact on the early game experience and remained invisible in the research journal, but *Hearthfire* adds features partially manifest even in the early game. In addition to the DLC, the *Special Edition* incorporates aesthetic enhancements in terms of texture quality and the lighting system.

Games with the scope of *Skyrim* are typically released with numerous small bugs in the game world (Ferrari, 2010), as it is impossible to fully playtest such a large world. These bugs are not relevant to the study, and were sidestepped by installing the user-made mod, the *Unofficial Skyrim Special Edition Patch*, which eliminates a lengthy list of bugs (Unofficial Patch Project Team, 2017). This mod did impose one limitation on the study, as any mod used with the *Special Edition* prevents the player from winning any 'achievements' within the Steam achievements system. The researcher considered this an acceptable sacrifice, as achievements play no role in world-building.

The subsequent sections of this chapter present a report on the findings from the study. The findings are complimented with references to paratextual documentation, academic and professional texts, and press articles about *Skyrim*. Once these findings have been summarised and analysed, the final section of the chapter connects the results back to the literature on cultural heritage.

## 5.1 Journal summary

The autoethnographic research journal (Appendix C), totalled 36,000 words of findings, collated over 11 play sessions averaging two hours in length for a total of 22.5 hours. Sessions included both play time and annotation time, with the game paused when note-taking. When describing the immersive method, Cuttell (2015) recommended using a voice-recording device for note-taking without breaking immersion through constant game pauses. However, the focus on world-building did not require immersion, but rather close attention to the constructive function played by encountered world and narrative elements. The journal included both observed elements and analytical thoughts accompanying these observations, an impracticable task without pausing the game. Conversely, recording audio entries would require substantial time for transcription.

Direct annotation involved mid-session pauses of up to 20-30 minutes. The author found the process meditative, where one observation would trigger a chain of additional observations and recollections. In some cases, observations depended on the author imagining the experience from different points of view; recalling his own first experiences of playing the game in 2011, and contrasting these experiences with the present state of knowing what to expect. Other parts of the *TES* franchise also surfaced in this

meditative process, as they would for any player who enters the game already familiar with *TES*. The journal remains centred around the direct experience of playing the game, but spirals out to incorporate additional layers of thought.

The research journal summarises the author's engagement with the series, and explains the decisions made in preparing for the recorded play. Sessions 1 and 2 account the introductory sequence of the game, where the player is led as a prisoner into the town of Helgen to be executed, saved by an unexpected dragon attack, and led through an introductory dungeon, escaping the dragon by an underground route. Sessions 3-5 follow the author to the hamlet of Riverwood, tracking the interactions with the game world and in Riverwood. In session 6, the author explored the first major dungeon of the game, Bleak Falls Barrow. Subsequently, sessions 7-10 trace the path to the city of Whiterun, the exploration of the city and its affordances, and continuation of the game's main storyline to the first fight with a dragon. Finally, in session 11 the author traced his steps back to Riverwood, through a nearby mine, and then explored the night-time forest landscape from the ruins of Helgen in the direction of the township of Falkreath.

The journal sessions (JS 1-11) are the primary source of results. A frequent secondary source is the *Skyrim* game guide (Hodgson, Stratton, & Cornett, 2013). The game guide (GG) is referenced with page numbers in Table 8.

Game guide section	Pages	Contents
Training	pp. 6-43	Song of the Dragonborn (p. 6). Description of available character races, skills and character archetypes.
	pp. 44-88	Description of basic game systems including combat, magic, and crafting.
	pp. 89-111	General gameplay information, exploration, followers, etc.
	pp. 112-130	Additional <i>Hearthfire</i> gameplay including home-building and adopting children.
The Inventory	pp. 131-167	Descriptions and statistics for all items the player can pick up in the game.
The Bestiary	pp. 168-197	Summary descriptions and statistics for all hostile creatures and NPCs.
Quests	pp. 198-504	Quest summaries for the main game.
Dawnguard Quests	pp. 505-582	Quest summaries for the <i>Dawnguard</i> DLC.
Dragonborn Quests	pp. 583-684	Quest summaries for the <i>Dragonborn</i> DLC.
The Atlas of Skyrim	pp. 685-1076	Description, maps, and images of all game locations.
Appendices	pp. 1077-1095	Collection of tables on key game elements.
	pp. 1096-1099	Sub-section on the dragon language and script.
	pp. 1100-1117	Index.

Table 8 Sections and pages in the GG (Hodgson, Stratton, & Cornett, 2013)

The Unofficial Elder Scrolls Pages (UESP)<sup>63</sup> constitute an additional secondary source. UESP pages are referenced according to designations in Table 9. Because the UESP has over 50,000 pages, only the nine pages invoked during analysis are listed.

UESP page	Designation	Contents
<b>Skyrim: Bardic Performances</b>	Bards	Summary of bardic performances in <i>Skyrim</i> .
<b>Skyrim: Dragon Language: Myth no More</b>	Dragon	Diegetic book about the dragon language.
<b>Skyrim: Loading Screens</b>	Loading	Summary of the loading screen functionality in <i>Skyrim</i> .
<b>Skyrim: Music</b>	Music	Summary of music tracks used in <i>Skyrim</i> .
<b>Skyrim: NPCs</b>	NPCs	Overview of NPC types in <i>Skyrim</i> .
<b>Skyrim: Radiant</b>	Radiant	Description of the Radiant quest generation system in <i>Skyrim</i> .
<b>Skyrim: Steel</b>	Steel	Description of all steel-based items in <i>Skyrim</i> .
<b>Skyrim: Voice Actors</b>	Actors	Summary of information about voice actor casting in <i>Skyrim</i> .
<b>Skyrim: Word Wall</b>	Wall	Summary of information about word wall locations and contents in <i>Skyrim</i> .

Table 9 UESP pages and designations used in analysis

## 5.2 Mapping the results

The results of the study, are reported in four sections, moving progressively from smaller elements to larger ones and ultimately to the complete game experience. The first section discusses the primary world-building components, the basic building blocks of the world, for example NPCs, dialogues, landscape components, fauna and flora, cultural vessels such as artworks, books and songs.

Components were derived from common-sense categories such as plants and animals, and subsequently split or merged based on gameplay functionality and other considerations. Environmental, social and cultural presence (Champion, 2006, 2007, 2015) were used as classificatory categories. Further categorisation was provided by Granström's (2013) matrix of 17 game elements for CH games, discussed in Chapter 2, and repeated here as Table 10 with the elements absent in *Skyrim* marked in grey.

As an example of the process of deriving primary world-building components, the initial category of plants was broken down into static plants with no impact on the game, and harvestable interactive vegetation. In turn, static plants were merged with other static nature elements such as rocks, into the static landscape category based on their functional similarity; the static landscape component did not include static architecture, which serves a similar gameplay function as natural landscape elements, but corresponds to cultural rather than environmental presence. Primary world-building components typically cover multiple elements from Granström's matrix, and may contribute to two or more types of presence, with particular overlap between social and cultural presence. Atomising world-building

<sup>63</sup> [http://en.uesp.net/wiki/Main\\_Page](http://en.uesp.net/wiki/Main_Page)

components into small enough sub-components where each sub-subcomponent only functioned within one category and presence type would have yielded an excessively detailed and unwieldy categorisation.

Category	Element	Description
<b>Interactivity</b>	Interactivity	Ability to affect, use or communicate.
<b>Interactivity</b>	Exploration	Openly navigable environment.
<b>Interactivity</b>	Tasks	Assignments, errands, missions, quests, challenges.
<b>Interactivity</b>	Dialogue	Communication/ Conversation between player and non-player character.
<b>Interactivity</b>	Quiz	Test with questions.
<b>Depth of Meaning</b>	Culture and history	Intangible heritage. Cultural expressions, rituals, traditions, customs, skills, beliefs, values. Historical events and developments.
<b>Depth of Meaning</b>	Story	Plot/Narrative.
<b>Characters</b>	Roleplay	The player assuming the role of the player character.
<b>Characters</b>	Avatar	Visual representation of the player character.
<b>Characters</b>	Personalized avatar	Possibility to alter the appearance of the player character.
<b>Characters</b>	Other characters	Real or virtual characters/actors.
<b>Characters</b>	Multiplayer	Ability to play with other players in the same environment.
<b>Accuracy &amp; realism</b>	Cultural & historical	Cultural and historical correctness.
<b>Accuracy &amp; realism</b>	Visual & behavioural	3D models, textures, shaders. Animation, artificial intelligence, crowd simulation, physics.
<b>Accuracy &amp; realism</b>	Environmental	Weather, day and night cycle, wildlife, vegetation.
<b>Accuracy &amp; realism</b>	Auditory	Sound.
<b>Accuracy &amp; realism</b>	Olfactory	Smell.

*Table 10 A matrix of 17 game elements useful for cultural heritage with elements absent in Skyrim greyed out (based on Granström, 2013)*

The second section examines supportive non-diegetic components such as the map and music. These components are similar in scale to primary world-building components. As non-diegetic components, these do not directly world-build, but instead play a supportive, reinforcing role. For example, music can be argued to contribute to all three types of presence by reinforcing player moods and impressions, but it does not contribute to world-building, as it is extra-diegetic.

The third section explored broader world-building structures laid out by Wolf (2012), including narrative, maps, timelines, genealogies, nature, culture, language, mythology, and philosophy. World-building structures are organisational devices used to combine primary world-building elements into larger groupings and ultimately into a coherent whole.

In the fourth section, the strategies employed by the developers were analysed, or *how* world-building elements are implemented, and what implications these strategic choices have for the entire process. This section also briefly analyses the way multiple world-building elements combine to produce more than the sum of the individual parts through the world-building gestalt (Wolf, 2012).



### 5.3 Primary world-building components

Twenty-two primary world-building components were identified from the research journal. The components were tabulated by category and game element from Granström's matrix, and by contribution to the three types of presence elucidated by Champion (2007; 2015), social presence, cultural presence, and environmental presence. The more elements contribute to a particular type of presence, the higher the level of complexity of the given type. Effectively, primary components build the world by increasing environmental, social and cultural complexity to the extent they contribute to presence. Alongside presence, the contribution of a given component to gameplay is also assessed. The qualitative extent of the contributions to presence and gameplay was a subjective judgement, with ratings including high, medium, low, and none. A high rating denoted extreme importance, where the sense of presence, or gameplay, would be substantially changed by any reduction in the given component. Medium denoted either a lower overall importance, or a high importance limited to only some parts of the game. Low denoted a noticeable, but generally insignificant contribution which could be safely removed without impact on the whole game, and the final none category denoted negligible contribution. The player character component was unique, because in a single-player game like *Skyrim*, the player is the point of origin for both gameplay and presence: the observer and the initiator of all actions, facilitating a reaction on the part of the world. In many ways, it is futile to speak of the player's contribution to presence or gameplay, but the player allows these to be experienced at all.

Most world-building components map to multiple points in Granström's matrix, and across two or three presence types. This overlap reflects the way most world-building components have multiple meanings and roles within the world. Components were only broken down into sub-components where this would help to improve understanding of the world-building process, for example by distinguishing NPCs and dialogue for clarity of discussion.

Primary world-building components are presented in three tables, based on the primary type of presence for the given component. Table 11 lists the nine environmental presence components.

World-building component	Situation in Granström's matrix		Contribution to presence type			Contribution to gameplay
	Category	Element	Environmental	Social	Cultural	
Static landscape (natural features and locations above ground, trees, grass)	Accuracy & realism Interactivity	Environmental Exploration Tasks	HIGH	NONE	NONE	LOW
Dynamic water (rivers)	Accuracy & realism  Interactivity	Environmental Auditory Behavioural Interactivity Exploration Tasks	MEDIUM	NONE	NONE	LOW
Environmental simulation (physics and fire)	Accuracy & realism Interactivity	Environmental Behavioural Interactivity Tasks	LOW	LOW	LOW	LOW
Environmental soundscapes	Accuracy & realism	Environmental Auditory	HIGH	LOW	LOW	NONE
Weather and day/night cycle	Accuracy & realism	Environmental Auditory	HIGH	MEDIUM	NONE	LOW
Natural resource worksites (harvestable & renewable/non-renewable mineral lodes)	Accuracy & realism Interactivity	Environmental Behavioural Interactivity Tasks	LOW	MEDIUM	MEDIUM	MEDIUM
Interactive vegetation (harvestable & renewable/non-renewable plants)	Accuracy & realism Interactivity	Environmental Behavioural Interactivity Tasks	HIGH	MEDIUM	MEDIUM	MEDIUM
Interactive static wildlife elements (harvestable nests and molluscs)	Accuracy & realism Interactivity	Environmental Interactivity	LOW	NONE	NONE	LOW
Interactive wildlife (mobile, potentially aggressive, harvestable animals capable of performing activities)	Accuracy & realism Interactivity	Environmental Behavioural Interactivity Tasks	HIGH	LOW	LOW	HIGH

Table 11 A matrix of Skyrim's world-building components (environmental)

Table 12 lists the four social presence components.

World-building component	Situation in Granström's matrix		Contribution to presence type			Contribution to gameplay
	Category	Element	Environmental	Social	Cultural	
Player character	Characters	Roleplay Avatar Personalised avatar	UNIQUE	UNIQUE	UNIQUE	UNIQUE
	Accuracy & realism	Behavioural				
NPCs (mobile, interactive characters capable of performing activities)	Characters	Other characters	NONE	HIGH	HIGH	HIGH
	Accuracy & realism	Cultural & historical				
	Interactivity	Behavioural				
	Depth of meaning	Interactivity Tasks Culture & history Story				
Communication (Player-NPC dialogues, NPC monologues, NPC-NPC dialogues, NPC-animal dialogues, action & dialogue vignettes)	Interactivity	Interactivity Tasks	NONE	HIGH	HIGH	MEDIUM
	Depth of meaning	Dialogue Culture & history Story				
Diseases (including vampirism and lycanthropy)	Accuracy & realism	Cultural & historical	LOW	HIGH	HIGH	HIGH
	Characters	Behavioural				
	Interactivity	Environmental Other characters Personalised avatar				
	Depth of meaning	Interactivity Dialogue Tasks Culture & history Story				

Table 12 A matrix of Skyrim's world-building components (social)

Finally, Table 13 lists the remaining nine primary components, from the cultural presence category.

Not all the elements from Granström's matrix are applied. The quiz (interactivity), multiplayer (characters), and olfactory (accuracy & realism) elements do not feature in *Skyrim* and therefore are not connected to any world-building component. In addition, the auditory (accuracy & realism) element was partially removed from the table for the opposite reason: given the general prevalence of sound in modern games, practically every world-building component incorporates audio. Consequently, instead of indicating the use of sound in every world-building component, the auditory element was only noted in those components where sound plays an unusually significant and persistent role. A similar reason led to the partial removal of the visual & behavioural (accuracy & realism) element: only the behavioural aspect of this element is noted. Every world-building component has some sort of visual aspect, so noting the use of visuals would obscure the use of behavioural aspects.

World-building component	Situation in Granström's matrix		Contribution to presence type			Contribution to gameplay
	Category	Element	Environmental	Social	Cultural	
Songs and musical performances	Depth of meaning	Culture & history Story	NONE	LOW	HIGH	LOW
	Characters	Other characters				
Static architecture (buildings and their interiors, ruins, roads, etc.)	Accuracy & realism	Cultural & historical	NONE	HIGH	HIGH	LOW
	Interactivity	Environmental Exploration Tasks				
	Depth of meaning	Culture & history				
Dungeon landscapes and architecture (underground mines, caverns, tombs, etc.)	Accuracy & realism	Cultural & historical	HIGH	HIGH	HIGH	MEDIUM
	Interactivity	Exploration Tasks				
Interactive architecture (doors, traps, architectural puzzles, locks & keys)	Depth of meaning	Culture & history				
	Accuracy & realism	Cultural & historical	NONE	LOW	LOW	MEDIUM
	Interactivity	Behavioural Interactivity Tasks				
Artificial worksites (lumber mills, forges, workbenches, cooking/baking sites, alchemy, enchanting)	Depth of meaning	Culture & history				
	Accuracy & realism	Cultural & historical	NONE	HIGH	MEDIUM	MEDIUM
	Interactivity	Behavioural Interactivity Tasks				
Useful artefacts (weapons, clothing, armour, jewellery)	Depth of meaning	Culture & history				
	Accuracy & realism	Cultural & historical	NONE	HIGH	HIGH	HIGH
	Interactivity	Behavioural Interactivity Tasks				
Consumable items (food, alchemy ingredients, potions, money) and crafting (smithing, alchemy, cooking, baking, building)	Depth of meaning	Culture & history				
	Accuracy & realism	Cultural & historical	NONE	LOW	LOW	HIGH
	Interactivity	Behavioural Environmental Interactivity Tasks				
Knowledge, art, and cult artefacts (books, notes, journals, maps, statues, paintings, tapestries, carvings, bas-reliefs, etc.)	Depth of meaning	Culture & history				
	Accuracy & realism	Cultural & historical	NONE	MEDIUM	HIGH	LOW
	Characters	Behavioural Environmental Other characters				
	Interactivity	Interactivity Story				
Non-useful artefacts (furniture, 'clutter')	Depth of meaning	Culture & history				
	Accuracy & realism	Cultural & historical	NONE	NONE	LOW	LOW
	Interactivity	Behavioural Interactivity				

Table 13 A matrix of Skyrim's world-building components (cultural)

One element Granström did not identify in *Skyrim*, culture and history (accuracy & realism), was nonetheless connected to several world-building components. From a heritage perspective, Granström correctly rejected cultural and historical accuracy in *Skyrim* because the game is set in a fantasy world. However, from a world-building perspective, there is cultural and historical accuracy, or consistency

(Wolf, 2012), internal to the imaginary world of *TES*. Aspects of the game can contribute to a sense *Skyrim* is a culturally and historically accurate reflection of established lore about Nirn, the world of *TES*.

A description of each of the primary world-building components follows. Most components yield enough complexity and detail to afford lengthy discussion, and are only summarised here to the extent required by the study.

### 5.3.1 Static landscape

The static landscape in *Skyrim* comprises primarily of natural features and locations such as mountains, cliffs, and rock formations, icebergs, ice floes, beaches, flatlands, and even individual small rocks and boulders. Non-interactive vegetation such as trees and fallen logs, grass and bushes, are also included. Excluded are natural underground caverns, more productively considered as dungeons.

The landscape facilitates all other world content, as the foundation of the world itself. The landscape is central to building environmental presence (JS 3). Different parts of the game world combine different palettes of static landscape components to build a complete and cohesive local environment, which is then enhanced by other components such as weather, dynamic vegetation, and wildlife. Even though the landscape only directly impacts the environmental aspect of the world, the social and cultural aspects emerging from other world-building components are built in cohesion with the landscape.

Perhaps the most unique item of the static landscape component is the swarm of ants (JS 11). Because they are fixed and non-interactive, ants are static landscape components. The ants are likely the smallest landscape detail (Ohannessian, 2011), and symbolic of the detail achievable in modern RPGs.

### 5.3.2 Dynamic water

Flowing rivers with currents capable of propelling the player and other bodies forward, adds dynamism to the water (JS 3). This dynamism is limited, with no weather-based or seasonal changes to water levels. The player may drown by staying too long under water, but there is no state of wetness, and no impact on player inventory.

From a world-building perspective, water contributes in ways similar to static landscape. However, the dynamism of water allows the implementation of environmentally convincing mountains with streams and rivers flowing downward to the sea across rapids, cataracts and waterfalls. Flowing water is also associated with background sounds; the presence of a flowing river offscreen nearby is prominently audible (JS 3, 10).

### 5.3.3 Environmental simulation

*Skyrim*'s simulation of the laws of physics and chemistry is limited to gravity and general laws of motion. Most physical principles are limited to static imitations; for example, fires can be observed to burn in stasis, never consuming their fuel nor hurting characters who step into a firepit (JS 9) Magical fire is an exception, as it does hurt characters; it can also set oil on fire, and the impact point of a gout of magical fire will temporarily singe a wall or other surface (JS 2).

From a world-building perspective, the simulation of physical and chemical reactions is underused to the point of irrelevance. Gravity does not contribute to social or cultural presence, and can detract from it; disrupting a household by knocking dishes from the table to the floor will not produce a true reaction from the NPCs. However, the presence of static, decoration-like fires in houses (JS 9-10), contributes to both social and cultural presence. The hearth forms a visible centre of the household, and tavern life also converges around the central hearth (JS 8). NPCs warming their hands over a fire help impress the sensation of frigid temperatures.

### 5.3.4 Environmental soundscapes

Complex ambient soundscapes stand out in wild outdoor environments (JS 3, 11), but are also used in interiors. It appears many outdoor ambient sounds are generated by localised emitters positioned throughout the landscape or automatically generated in connection to objects such as trees and rocks (JS 3). The landscape becomes a soundscape; birdsongs fade in and out as the player moves past. Some sounds are audible only at night (JS 11). Interiors can be dominated by complex sound samples. For example, the din of a crowd in an inn (JS 8), or the wind whistling through a cave system. Interiors may have more specific sounds are played only in small areas, like the hum of machinery in dwarven ruins.

The soundscape has no impact on the gameplay. However, its impact on the sense of environmental presence is tremendous. A background soundscape is a subtle, yet powerful method of conveying greater complexity to the environment. Its use for social and cultural presence is lesser and sometimes problematic, as when the ambient din sounds in *Skyrim*'s inns conveys the impression of a crowd in an empty inn. Most artificial interiors only use some sort of low-level natural ambient noise, presumably to eliminate unnatural silence.

### 5.3.5 Weather and day/night cycle

Weather in *Skyrim* ranges from sunshine to thunderstorms and blizzards (JS 1, 5, 11). There is also a day/night cycle, impacting the lighting in the exterior. Neither the weather, not the day/night cycle are meaningful simulations. The player is no more nor less likely to encounter animals outdoors in the middle of a thunderstorm or a blizzard compared to fair weather. Snow does not build up due to snow-

fall, nor do rocks become slippery due to wetness. The gameplay impact of the weather is the change in the viewing horizon, and the alteration of the ambient soundscape. The day/night cycle has no real gameplay impact except in combination with vampirism, although the behaviour of other components, especially NPCs, changes with the cycle.

From a world-building perspective, the weather and the day/night cycle are crucial for the establishment of environmental presence, and as triggers for change in other world-building components. In the *Special Edition*, volumetric light scattering, or so-called 'god rays' (Moreau-Mathis, 2014) made sunsets (Image 6) and sunrises powerful experiences (JS 3, 7). The impact noted here echoes earlier discussions in reference to *Oblivion* (Champion, 2007; Ruberg, 2007), in particular the notion of the 'sublime' landscape (Martin, 2011b).



Image 6 Environment and lighting over Lake Ilinalta at sunset in Skyrim (*Special Edition*)

A final aspect of the day/night cycle is the sky itself. The UI makes celestial navigation unnecessary, but the means are there: the sun, the two moons, as well as identifiable constellations (JS 11).

#### 5.3.6 Natural resource worksites

A variety of mineral ore sites may be exploited by the player or NPCs may using an appropriate tool such as a pickaxe (JS 11). Exploitable minerals include base and precious metals, stone and clay, and other more esoteric fantasy resources (GG, pp. 84-87).

Most mineral ore worksites are situated inside mine complexes like the Embershard Mine (JS 11). Worksites form a visible component of the province's economy. Players may extract resources using a pickaxe; other NPCs will pantomime appropriate animations, but do not extract anything. Mineral ore worksites can be exhausted when mined by the player, but because new worksites cannot be excavated, existing sites eventually regenerate (GG, p. 84).

From a world-building perspective, natural resource worksites are one of several ways *Skyrim* conveys the resource-oriented nature of the provincial economy. Outdoor worksites also draw players to investigate rocky landscapes that are otherwise possibly uninteresting for players. Worksite resources provided fuel the crafting process.

### 5.3.7 Interactive vegetation

Parts or fruits of a variety of interactive plants are harvested to obtain articles of food or ingredients for alchemy. Most interactive plants grow wild, but there is also a small range, mainly fruit and vegetables, of farmed plants. Some interactive plants, such as garlic, exist only in an already-processed form, hanging in kitchens of many houses, and may also be harvested (JS 2).

A harvested plant changes visibly, with a part or the whole plant disappearing from the landscape. The player quickly learns to recognise useful plants among static vegetation. The researcher found himself moving in zig-zags, to collect as many wild flowers as possible (JS 3). A harvested plant eventually regenerates (JS 11).

Interactive vegetation conveys the relationship between people and plants. Interactive plants are *useful*, producing consumable resources, providing rewards for investigating the countryside. Most plants tend to concentrate in specific biomes, players experimenting with alchemy will continually seek out new plants while travelling. Farmed plants, concentrating in fields and gardens, convey the primary food economy of the province (JS 7).

Interactive vegetation also contributes to social and cultural presence. Dried plants hanging in kitchens convey herb usage in the culinary arts. In the fields outside, NPCs convey the role of agriculture in the province by performing animations tending their plants, although they never actually harvest them. The player may obtain revenue by collecting plants from a field and bringing them to a farmer.

### 5.3.8 Interactive plant-like wildlife forms

Some forms of wildlife are functionally identical to interactive vegetation from a gameplay perspective; this includes chicken nests (JS 4), bee hives (JS 11), bird nests (JS 5), or pearl oysters. All such forms of wildlife can be harvested, yielding eggs, clams, honeycombs and other resources useful either as



alchemy ingredients or as food. Dead rabbits and pheasants are found hanging alongside dried herbs in many households (JS 2), while salmon can be found drying on racks outdoors. Just like dried herbs, these forms of animals can be harvested for meat, and communicate the high importance hunting plays in *Skyrim*'s primary resource-based economy.

Interactive static wildlife contributes to world-building by building up environmental complexity and cultural complexity. The domesticated bee is notable; artificial bee hives are connected narratively to the mead industry producing much of the alcohol to be found throughout *Skyrim* (e.g. GG, pp. 286-289).

### 5.3.9 Interactive wildlife

Interactive wildlife in *Skyrim* ranges from the insects and fish that can be caught by hand for use in alchemy, through various types of wildlife (GG, pp. 170-171) including rabbits, cattle, wolves, deer, elk (JS 7, 11), mammoths (JS 9), and fantastic creatures such as frostbite spiders (JS 3, 6). Less notable are bird flocks (JS 1), which will only take off and fly away when the player nears a given area.

Some animals like rabbits, chickens, and hawks, are defenceless, but others will counter-attack when attacked by the player. Animal behaviour follows the basic division between herbivores and carnivores, though large herbivorous mammoths (Image 7) can attack the player. Some animals offer additional functionality. Horses, can be purchased, owned, and ridden by the player (JS 11). Dogs can be recruited as followers, and 'converse' with the player or NPCs (JS 5). The gameplay boundary between wildlife and NPCs is blurred.



Image 7 Mammoth herders in *Skyrim* (original edition)

Like NPCs, animal behaviours are amplified through the world encounter system used to generate special events involving animals: two wolves hunting an elk, sabre cats fighting a mammoth, an NPC hunter stalking an elk, and so on (GG, pp. 674-680). Such events convey the impression of naturalistic behaviours and food chains.

Most animals, when killed, will yield resources, from meat and hides to alchemy ingredients such as the eye of the sabre cat or bear claws (JS 3); finally, some items such as mammoth tusks and horker are functionally useless but can be sold for profit. Live animals do not yield resources; the player may encounter milk-based products from goats, cows and mammoths, but cannot milk such animals. Domestic animals are also never milked or killed by NPCs for food.

Animals in the wilderness contribute to environmental complexity, conveying the sense of a wild world where hunting is risky but useful. The range of animal forms and animal-derived resources communicate the importance of animals in the economy and influences other world-building components. The stocky horse and shaggy cattle breeds depicted in the game contribute to a sense of environmental fridity, also justifying their lower importance in the economy compared to hunted animals. Finally, although diseases are examined as a separate world-building component, animals enable diseases as one of the primary vectors of contagion.

#### 5.3.10 Player character

The player character is not determined in *Skyrim* by the world-builders. Players may contribute to world-building by creating and role-playing an appropriate character, though they may also damage world-building by ignoring role-playing aspects. Whether the player will role-play or not will depend on the extent to which the world is able to draw the player in. In this sense, the player is the central, focal point of world-building: the whole world succeeds by evoking a sense of environmental, cultural and social presence in the player.

Player character generation is rich in world-building, allowing the player to examine different playable races and ethnicities, or to customise their appearance including facial features, hair styles, and war paint or tattoos, providing an overview of the common styles of appearance (JS 2). The choice is not gameplay-neutral, as each race or ethnicity has different basic abilities and traits, allowing players to tailor characters to gameplay preferences. These differences convey the different inclinations members of different groups inherit through cultural upbringing or biological nature (GG, pp. 7-11).

NPCs react differently to the player depending on his character. Hearing other characters refer to the player's race builds social presence by reminding the player race/ethnicity is socially relevant. However,

this aspect is curtailed for gameplay purposes; in theory, a cat-like Khajit or lizard-like Argonian player should be subject to extensive abuse in *Skyrim* (JS 7-8), but this issue is sidelined for playability.

Level progression and skills also contribute to world-building (JS 2, 3, 5-6; GG, pp. 12-37). The smithing skill provides an illustrative example. The player progressively gains the ability to work with finer materials: iron first, then steel, then elvish and dwarven materials, and so on. Skill progression communicates the difficulties of crafting, explaining why some materials are more expensive (JS 5).

### 5.3.11 NPCs

As the primary actors with whom the player interacts, NPCs are at the heart of the gameplay, providing most of the combat the player encounters, and acting as the starting points for most quests and tasks (UESP, NPCs); NPCs may also serve the player as followers (JS 11). NPCs are the embodiment of social presence, as they constitute a virtual society; they also contribute to cultural presence (JS 4-5, 7-10).

NPCs perform actions employing special animations for verisimilitude (Image 8), with the potential to surprise the player with previously-unobserved actions after many hours of play (JS 4). However, except for combat, most NPC actions and behaviours are illusory. Perhaps the best analogy is pantomime; NPCs spend their days performing inefficacious pantomimes, pretending to cook, to smith, to tan hides, to mine ore, to operate lumber mills, to sweep the floor, to read books, to concoct potions, to tend plants, to warm their hands over a fire, and so on. Some actions change the NPC's state, like sleeping on a bed, or sitting in a chair, serving to enable other pantomimes. An NPC genuinely sits down, but only pretends to eat or drive a carriage. Playing musical instruments is a more efficacious pantomime, described in the component of songs and musical performances. NPCs may also ride horses<sup>64</sup>. Finally, NPCs can talk, but communication is described as a distinct component.

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<sup>64</sup> NPCs riding horses are rare, but may be seen through world encounters such as a travelling noble, or the headless horseman (GG, pp. 677-680).



*Image 8 NPC pantomime gardening in Skyrim (Special Edition)*

NPC pantomimes provide a sense of social and cultural complexity. As the player walks through an inhabited area (e.g. JS 4-5, 7-10), there is an illusion of NPCs living their lives. Pantomimes are organised through daily schedules. NPC schedules ensure actions like sleeping or eating are performed at appropriate times during the day and night; however, NPCs can also elastically react to schedule-disruptive player interventions.

NPC pantomimes also expose the daily fabric of life – cooking methods, industrial and craft production, knowledge consumption, meditative activities and creative performances. Cultural and social differences can be stressed by providing different NPCs with different affordances and restrictions: a noble sitting on a throne (Image 9), or a servant girl who spends most of her time with a broom.





*Image 9 Socially stratified NPCs in Skyrim (Special Edition)*

NPCs use a variety of clothes and equipment. These items are used to world-build a diverse range of NPCs, with the type and quality of equipment used to communicate ethnicity, employment, and social standing.

The final world-building aspect of the NPCs are their social roles varied by race/ethnicity and status. Most of the wealthier merchants encountered in Riverwood and Whiterun were Imperial, the nobles were Nord; the Jarl's personal bodyguard, unexpectedly a dark elf, was commented on by her Nord underlings (JS 8-9). Cultural differences are further highlighted through culturally grounded names (JS 10). Names in *TES* are a shorthand to communicate to players the affinity between fictional cultures and real counterparts (Sinder Velvin, 2008). This is most prominent with the Imperials, whose names are Roman or Italian: Carlotta Valentia, Camilla Valerius, Tullius, Caius, and so on. The Nord names are Scandinavian in origin or likeness, while Bretons are French. Other groups follow less recognisable, but internally consistent naming schemes.

The diverse natures, equipment, and activities of *Skyrim's* NPCs build the core of the social world, while contributing also to the cultural world. NPCs are a world-building focal point.

### 5.3.12 Communication

*Skyrim* allows NPCs to carry out conversations and situational vignettes involving two or more NPCs and choreographed actions (JS 1-2, 4, 8-9). NPCs also utter one-liner monologues in reaction to player

actions, traits, abilities, or items. However, NPC dialogue possibilities are limited. Many NPCs in *Skyrim* have no dialogue options, only uttering one of several available one-liner dialogues upon the player initiating a conversation. Such ‘dialogues’ allow NPCs to broach several different topics without the player having to ask stilted questions. Dialogues are light-weight, brief, easy to overlook, but propped up by repetition from other characters. For example, when the researcher first entered Riverwood (JS 4), he heard from multiple NPCs about a burglary at the Riverwood Traders; each time, the information was brief and easily missed. NPC-on-NPC dialogues can be lengthy, but the only player-on-NPC dialogues of length are those directly related to the storyline (JS 9).

The player character is mute, and most player dialogue lines are not even shown in textual form. Players do not know what their characters say to NPCs, hearing only the reaction. When multiple conversation options are available, they are written out only as shorthand questions or topics. The mute player provides freedom for NPC dialogue structures, as they do not have to match player lines.

The dialogue interface is also used for trade, and to issue commands to NPC followers. The dialogue interface is also used to propose marriage or to adopt children, and for subsequent familial interactions, e.g. to obtain a meal from the spouse<sup>65</sup>.

Dialogues are critical to gameplay and world-building across the social and cultural domains. Dialogues provide the player with tutorial information, inform the player about potential quests and other interesting events, people, facts, rumours and news. Dialogues initiate, update, and end quests. Dialogues are used as a feedback mechanism, integrating the player in the world by providing a reaction to player actions, progression, and identity. Reactive dialogues integrate the world, showing NPCs in one place are aware of events elsewhere (JS 9). Although potentially repetitive, NPC-to-NPC dialogues foreground various relationships.

Except for some special characters who were given exclusive voices from known actors like Christopher Plummer (Bethesda Softworks, 2011), most NPCs share a voice with other NPCs of the same sex and racial/ethnic group (UESP, Actors). Voice becomes a marker for ethnicity. When playing the game, the author found the limited range of voices enhanced awareness of the surrounding ethnic mixture (JS 8).

### 5.3.13 Songs and musical performances

The research journal only recorded encounters with bards in Riverwood and Whiterun (JS 5, 8), but most inns in *Skyrim* have bards (UESP, Bards). A bardic performance is a pantomime involving the playback of

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<sup>65</sup> Readers familiar with the various sex and nudity-oriented scandals that over the years have erupted around different video games, will perhaps smile at the irony marital relations in an adult-rated game like *Skyrim* are expressed always in full clothing, and almost exclusively through dialogue.

a musical sequence and voice samples (Image 10). Bardic performances are social event, as other NPCs can perform a dance animation (JS 8) to the music; performances can also be disrupted by player or NPC actions.

The game contains a variety of mainly instrumental musical compositions the bards can perform. Any bard can only play some of the compositions. Unless the player seeks out multiple bards in short succession, the game can put forth the impression of a richer musical world simply because the player will need to travel to multiple cities before experiencing the full range of songs. This impression is amplified by bards having a variety of voices.



*Image 10 Tavern interior with playing bard in Skyrim (Special Edition)*

During the game, the player may visit the Bards College, where bards learn their craft. The College facilitates a rare combination of interactivity and performances, giving players the opportunity to help recover a partially lost song by suggesting to performer how the gaps in the lyrics should be filled (GG, pp. 413-414). The subsequent performance of the song demonstrates the interactive compositional and performative possibilities latent in the simple combination of dialogue and song. Some songs are also curtailed socially or dependent on player actions (UESP, Bards), providing a sense of cultural dynamism. In the latter case, “The Dragonborn comes” is only sung after the player’s identity as the Dragonborn have been revealed; later, “Tale of Tongues” is sung after the player defeats Alduin. The player’s deeds are literally commemorated in song.



Songs and instrumental performances are pure world-building. They contribute to the world in its social and cultural aspects above all by their extraneousness. Removing bardic performances would not change gameplay. However, the social world would be palpably poorer for the lack of the music in taverns, or the player's ability to request songs, or the not-so-subtle signal of a city's political alignment broadcast by the bard singing to the glory of the Empire or of the Stormcloaks. The cultural world would equally be impoverished by the absence of songs setting the tone for the raw, combative Nord culture where even the comedic "Ragnar the Red" concentrates on blood and combat.

#### 5.3.14 Static architecture

Static architecture ranges from makeshift tents, through a range of wooden and stone houses of varying sizes, to the monumental palaces, castles, and temples (GG, pp. 685-1076). Static architecture represents a variety of styles (Image 11), allowing players to quickly identify its age, cultural origins, and present role. Static architecture also includes the walls and fortifications unifying cities and dividing them from its satellite settlements, as well as the roads and bridges connecting locations throughout the world in a complex network.



Image 11 Whiterun's static architecture in Skyrim (Special Edition)

Architecture in *Skyrim* is purely static: a ruined building will stay ruined; a well-kept building will not burn down or sustain weather damage. Only scripted events such as the dragon attack on Helgen provide the illusion of dynamic change (JS 1-2, 11). The *Hearthfire* DLC also allows the player to



construct a house, again simply through the instant appearance of house parts while the player's back is turned (GG, pp. 112-124). This simple crafting-based process provides players with insight into building methods.

Static architecture plays a notable role in world-building: as a component of cultural presence and a facilitator for social presence, it serves as the context and interface between society and nature, showing how society adapts, endures, or fails to endure in its environment.

### 5.3.15 Dungeon landscapes and architecture

Dungeons have always been the mainstay of RPG games (Barton, 2008). Chapter 3 described *TES'* evolution from generic dungeons as culturally-incomprehensible excuses for dungeon-based gameplay, to the modern culturally diverse forms of dungeons justifying their role through cultural and environmental coherence.

Dungeons in *Skyrim* are diverse (GG, pp. 685-1076): natural caverns or semi-natural cave-mines (JS 11); ancient sites like Nord ruins (Image 12) inhabited by the restless dead (JS 6). There are also 'classic' dungeons, the storage and prison complexes hidden underneath fortresses (JS 2). Different dungeons meld seamlessly; Bleak Falls Barrow, a Nord ruin and burial site, is interrupted by places where collapsed sections force the player to detour through natural caverns or crevices open to the sky (JS 6).



Image 12 Bleak Falls Barrow interior in *Skyrim* (Special Edition)

Dungeons in *Skyrim* build cultural complexity by extending the game world's chronology into the past. As *Morrowind* and *Oblivion* designer Ken Rolston notes, fantasy RPGs are strongly concerned with melancholy feelings evoked by the passing of civilisations (Remo, 2009). The modern RPG dungeon is an archaeologically, culturally evocative setting; and in *Skyrim*, there are even NPC archaeologists working in some dungeons, investigating forgotten cities (GG, pp. 256-258) or the inscrutable culture of the Dwemer (GG; 293-295).

#### 5.3.16 Interactive architecture

Interactive architecture is a supportive architectural component in the form of doors, locks and keys, traps of swinging axes or fireballs, and elaborate mechanisms to open drawbridges or large gateways. Interactive architecture is significant for gameplay; as a world-building component it only provides a light additional touch of detail. The integration of puzzle mechanics into the cultural world is poor (JS 6). However, the diversity of interactive architecture reinforces cultural distinctness of various dungeons. A dwarven ruin may require the activation of a machine that extends a mechanical drawbridge or lowers/raises the water level (e.g. GG, pp. 1059-1061). Nord ruins require the player to manipulate elements decorated with three or four images chosen from a broader set of culturally significant animals including the wolf, bear, snake, whale, eagle, dragon, owl, and moth (JS 6). The culturally-varied interactive mechanisms support the overall cultural significance of their sites.

#### 5.3.17 Artificial worksites

Like natural worksites, artificial worksites involve an NPC or the player repeatedly performing an animation or set of animations to give the impression of performing a machine-aided or equipment-aided activity (JS 4). For NPCs, the use of a worksite is an empty pantomime producing no results, but conveying the impression of productive activity.

Artificial worksites can take various shapes, from the large water-wheel-powered lumber mill to the small drafting desk. Most worksites involve crafting, the processing of consumable items into new products (JS 5, 8). These include the smelter to process ore into metal, the forge to turn metal into arms or armour, the grinding wheel and the worktable to sharpen weapons or improve armour, and so on. Cooking equipment has a use in allowing the player to process raw food into more beneficial cooked forms (JS 4). Relatively unique is the drafting table and carpenter's workbench, which are used to select a component to incorporate into the player's house, and then to progressively build it by adding a foundation, wooden wall supports, wood-and-clay walls, and so on (GG, pp. 112-124).

From a world-building perspective, artificial worksites convey a sense of *Skyrim*'s limited secondary industries, showing NPCs operating smithing equipment and processing lumber. Artificial worksites also

affix player crafting processes to specific locations, communicating to players crafting activities require special resources beyond what can be carried.

### 5.3.18 Useful artefacts

Most artefacts in *Skyrim* are useful or wearable. This category includes clothing, armour, weapons, magical staves, and various forms of jewellery (GG, pp. 136-145). Wearable items including jewellery can be imbued with magical enchantments, and thus utilitarian: a ring of water-breathing, a necklace of health, a helmet improving smithing ability, and so on. Even the religious amulets of different deities provide bonuses to the wearer (JS 10). Artefacts are also used as decorative elements, to be hung on walls and mannequins (JS 9).

The gameplay and world-building roles of useful artefacts melds together: the significance and monetary value of artefacts relates to their gameplay benefits, while the nature of artefacts from a given culture expresses the preferences of its adherents. There is no heavy elven armour – all elven armour is light, while dwarven and orcish armours are heavy. The quality of different types of weapon and armour also expresses cultural prowess: the superior quality of orcish heavy armour over Nord heavy armour, as well as the fact that producing the latter requires less skill than the former, expresses the superiority of orcish workmanship and materials. Relations between culture and quality can be more complex; in the case of orcish products, while orcish armour is superior to dwarven armour, orcish weapons are inferior to dwarven weapons (GG, p. 136). The gains in quality are typically offset by an increase in weight: more effective items are heavier. The translation of gameplay into an expression of culture can be described as procedural world-building, in line with Bogost's (2007a) procedural rhetoric. The monetary value of most artefacts is a combination of their utilitarian properties and the value of resources used (GG, pp. 136-145).

### 5.3.19 Consumable items and crafting

Consumable items in *Skyrim* include animal, vegetable, and mineral resources: plants for alchemy (JS 8) and cooking (JS 4), minerals for manufacture of useful artefacts (JS 5, 11), and animals yielding multiple resources for alchemy, cooking, and crafting. Some minerals and timber are used to build housing and furniture (GG, pp. 112-124). Some crafting outputs are also consumable, either as an end product in the case of food and potions, or as part of a production chain in the case of leather and metal ingots, which are crafted as resources for further crafting. The author also classified currency as a consumable item, because the game's economy is designed to remove money from the world (e.g. JS 10); the only use for money is consumption through trade.

Crafting (Image 13) exposes production processes, showing how specific modes of production function within the game world, and what various objects are made of. Any such processes, when they have an equivalent in reality, are invariably greatly simplified both in process and resources, as exemplified with cooking food (JS 4). Nonetheless, such processes enhance the player's understanding of the world. Crafting also drives players to explore the world and seek out consumable resources.



Image 13 Crafting interface in *Skyrim (Special Edition)*

Money is more limited as a world-building resource. The currency shows all throughout the Empire, a unitary currency minted by the Emperors is used. However, money does not, surprisingly, contribute to an understanding of the province's economy, because gameplay balancing affects economic logic. Many crafted items have a substantially lower value than the resources they are made from; a steel dagger sold for 18 gold requires resource with a combined value of 30 gold (UESP, Steel). This economic incoherence provides the player another driving factor to explore. If the player is trying to learn crafting skills such as alchemy (JS 10) or smithing, the learning process is expensive, but promises long-term profits.

### 5.3.20 Knowledge, art and cult artefacts

There is a range of items in *Skyrim* communicating with the player in written, schematic, or artistic forms, or serve as focal points for religious cult. Some of these items, like books, are portable and can be manipulated using physics; most others are static, though not necessarily non-interactive. Maps change

over time due to player actions, and can be examined and used to mark locations on the player's own user interface map, while statues of deities can be 'activated' to obtain blessings.

There are more than 300 books in *Skyrim* (GG, pp. 156-160; Appendix J). These include both printed and handwritten texts. Some books enable quests, or improve player skills (JS 6). Most serve purely to transmit knowledge, and much of this knowledge is not directly applicable to the narrative. The lack of direct applicability is well illustrated by 60% of *Skyrim*'s books being re-used from earlier *TES* games<sup>66</sup>. The prime objective of most books is world-building in the most classical form (Wolf, 2012): showing the world through stories. However, the stories told through *TES* books have multiple layers; most books are signed by fictional authors, whose identity and writing style hints at their personal subjectivities and biases (DiPietro, 2014). An example is "The Alduin/Akatosh dichotomy" (JS 10). This book, written from the perspective of a scholar, is wrong in its conclusions: the unfolding narrative of the game would ultimately reveal the author misinterpreted the evidence presented in the book. However, the player can potentially rise above the author's mistakes and correctly interpret the presented evidence. *Skyrim*'s literature is subjective, misleading, uneven and inconsistent in the amount of exposure granted to different aspects of the world. Some aspects are neglected, leaving the player to seek out information via other means, while other aspects, usually those less relevant to the narrative, are inundated with information.

Maps, like books, provide information (Image 14). Other works of art, are less informative and more open to interpretation, contributing to the world more subtly. The most basic type of art work, the trophy animal head (JS 11), highlights the importance of hunting in Nord culture. The *Hearthfire* DLC provides the player with the means of preparing and displaying hunting trophies in his own house (GG, pp. 112-124).

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<sup>66</sup> See Appendix J.





*Image 14 Mapping the civil war in Skyrim (Special Edition)*

Many of the statues the player encounters in *Skyrim* are focal points for religious cults. These range from small temple statues to monumental statues such as the prominent statue of Azura, mentioned by an innkeeper as one of the province's sites worth visiting (JS 5). Most statues can be 'activated' to obtain tangible benefits like temporary ability boosts (JS 8). Some statues allow communication with the god they depict, who offers the player a quest (GG, pp. 378-407). Religious cult objects serve as direct cultural and social links with a responsive pantheon of deities. The author found this experience jarring; such direct interaction with gods and 'prayer' with guaranteed efficacy deprives religion in *TES* of mystique (JS 8, 10). However, this is also a world-building message: the gods of Nirn are active agents providing tangible interventions confirmed through procedural mechanics.

### 5.3.21 Other artefacts

A final material component of world-building encompasses all remaining items. This category includes static furniture, which typically has one interactive function, either as a container for storage, or as a place for sitting or sleeping, and various non-interactive static wall and floor decorations, ceiling candelabras, and so on. Finally, there is a diverse collection of small clutter<sup>67</sup> (JS 2), items like plates, pots and forks, shovels, or even utter trash like unreadable ruined books. Larger elements of clutter, such as small carts, logs, and debris, can serve as parts of physics-based traps (JS 11). The physical ability to manipulate clutter contributes to the world's virtual tangibility (Schut, 2016).

<sup>67</sup> So-called because items of this type are categorised internally as clutter in *Skyrim*'s Creation Kit.

Clutter holds little gameplay relevance, as do house decorations and furniture. However, these items contribute to world-building, by depicting everyday items, and by showing the difference between the objects used by different social classes, from the wooden plates and bowls of the ordinary Nords to the expensive decorative items found on the tables of nobles (Image 15).



*Image 15 Richly cluttered interior of Jorrvaskr in Skyrim (Special Edition)*

### 5.3.22 Diseases

Diseases contribute to environmental complexity by indicating bacterial or viral life, and to social complexity by providing opportunities for NPCs to react appropriately to a player in a diseased state. Diseases are typically contracted from contact with animals (JS 7). Diseases are linked to animal types, indicating possible parasitic relationships (GG, p. 55).

Disease symptoms have low gameplay impact; the research journal documents a situation (JS 7) where the researcher contracted a disease and failed to notice until an NPC pointed it out. NPCs will comment on the player's appearance, and their faces will indicate some emotional concern, but there is no sense of social ostracism of characters carrying presumably contagious illnesses. Diseases are cured instantly through potions or temple blessings.

Two special 'diseases' are vampirism, and lycanthropy. The complex gameplay impact of these states need not be described here as it bears little relevance to world-building. However, in both cases, the player experiences a high-impact condition requiring quests to be cured, and triggering unique NPC

interaction experiences of ostracism and bonding (GG, pp. 56-64), showing the potential for more complex interactions between the player, the social world, and an illness<sup>68</sup>.

## 5.4 Supportive extra-diegetic components

Existing outside of the game world, extra-diegetic components world-build indirectly, influencing the player's experience. Two such components, music and the user interface (UI), were identified from the research journal (JS 1, 3-4, 11). A third, the game packaging and manual, was added to interrogate its absence in the research journal. In the context of the framework used to organise primary world-building components, the three extra-diegetic components supported everything, but belonged to no category.

### 5.4.1 Extra-diegetic Music

The influence of extra-diegetic music on world-building is elusive. Music is used sparingly in *Skyrim*, accentuating pivotal narrative moments, dramatizing combat, and liminal acts of passage into special locations (JS 3, 11). Musical elements often combine with player actions accidentally, and it is up to the players to internally justify the melding of gameplay and music (Bethesda Softworks, 2011). The main theme is used to set the tone for the game. In *Skyrim*, the longer tradition of *TES* music is aligned with the game's Nordic culture, using "The Elder Scrolls *theme, but sung by a barbarian choir*" (Todd Howard, cited in Bethesda Softworks, 2011). The theme engaged in world-building by using the fictional dragon language for the barbarian choir, thus introducing new linguistic motifs.

Like earlier *TES* games (Carlsson, 2007), music in *Skyrim* is divided into thematic groups: combat, dungeon, exploration, town, tavern, and special themes (UESP, Music). While combat and special themes are played in reaction to events, other types match what Sweet (2015) describes as an open system, where music serves more as an ambient background than an emotional point. Such a system appears to contribute to world-building by building evocative associations between certain musical elements and instruments, and specific environmental or cultural contexts.

The functions of extra-diegetic music in world-building and culture are under-explored. Wolf (2012) barely mentions music when discussing auralisation, likewise in Bartle's (2004) virtual world design analysis. Granström's (2013) matrix includes music in the auditory component, but does not discuss its role beyond mood-setting. Digital humanities discourse around virtualisation of culture is dominated by visualisation while neglecting other sense (Champion, 2015). A body of game studies and industry literature on game music is building up (e.g. Collins, 2008; 2013; Nitsche, 2008, pp. 133-138; Phillips,

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<sup>68</sup> For a longer discussion of disease-based impact in game worlds including *Morrowind*, see Brown (2008).



2014; Sweet, 2015). However, so far only Phillips (2014) considered the role of music in world-building, arguing RPGs and MMORPGs “*should surround the player with aural details about the intrinsic nature of the setting in which the game takes place*” (Phillips, 2014, p. 103), an apt description of *Skyrim*’s use of music. Extra-diegetic music is rarely a world-building feature, but it can amplify or weaken the impact of other world-building features.

#### 5.4.2 The user interface

The user interface (UI) is a facilitator; a set of elements providing users access to game or program features in an effective manner (Murray, 2012). As a supportive world-building component, the extra-diegetic UI facilitates exploration of the world and its details, through four UI elements: the loading screen (JS 1), radar and map (JS 3), inventory screen (JS 4), and quest log (JS 3).

The primary purpose of a loading screen is functional: it is to keep the player occupied while the game is paused to access data, like when entering/exiting an interior or one of the cities. The screen displays the 3D model of a game object, character or creature, with 2-3 lines of text informing about the relevant game concept. Loading screens are typically random, but some screens are prescribed for particular occasions: the start of the game (JS 1), during particular quests, or at particular locations (UESP, Loading). Unusually for *Skyrim*, the information is presented in an objective, non-diegetic point of view, except when quoting a character or diegetic book. Loading screens reveal numerous aspects of the world, such as historical trivia about cities or descriptions of wildlife, but also gameplay information (UESP, Loading). The loading screens enculture players into the game with reliable but fragmented knowledge, unpredictable in terms of accessibility.

The radar and map continually expose the player to potential sites of exploration, and track already-explored sites:

*“[The radar] takes away the surprise of unexpectedly finding a place or landmark, but in return it populates the world with possibilities. As you walk along, you can see all the time where you can go to find something interesting; the places you’ve visited also show up on your personal map, and their icons change from black to white, so this is also a tallying mechanism.”* (JS 3)

Players are thus informed about nearby sites of significance warranting diversion from their route, bringing the world to their attention.

The inventory screen exposes small details, giving players basic information about an object, and a rotatable 3D model of the inventory item (JS 4). The rotation option is used for door puzzles involving three-clawed ancient Nord keys that work when rotatable animal symbols on the door are correctly

aligned; the correct sequence is on the claw's palm, and can be seen when inspecting the claw in the inventory screen (JS 4, 6). While rarely used in gameplay, the rotatable item visualisation lets players examine elements of the world close-up, allowing them to discover narrative and cultural details, a form of embedded storytelling (Jenkins, 2004).

The final supportive UI element is the quest log (JS 3). All player tasks are automatically added to the log and updated with progress. The quest log distinguishes between major quests with multiple stages of completion, and smaller, so-called miscellaneous quests. Any quest can be set as active, in which case a marker is added to the map and radar pointing to the quest's current objective. Completed quests are greyed out at the bottom of the log. The player is thus given a summary of current and past quests. Within the limited timeframe of the research journal, the quest log rapidly filled up with numerous quests of various sizes, tugging towards diverse locations across the province. Visiting Whiterun (JS 8-10) demonstrated a typical experience with quests, as completion of one quest led the player to a quest hub (Totten, 2014) where numerous new quests begin.

#### 5.4.3 The game packaging and manual

The packaging and manuals are paratexts leading the user into the product (Genette, 1997). By omission, neither paratext is referenced in the research journal. The researcher, having used *Skyrim* for six years, neglected the items are experienced by the player when first accessing the game. However, this omission addresses a deeper change in the way games are experienced in digital distribution; fewer users access the game via traditional paratexts. The brevity of *Skyrim's* manual seems to reflect this fact. The game does not require the manual; every aspect of gameplay is carefully introduced through small, semi-structured tutorial sequences (JS 2, 5) reflecting the ideal of situated learning, common in games (Gee, 2006).

Like previous *TES* games (Howard, 2003; Rowland, 2014), the game also included a paper map, a diegetic paratext extruded from the game world, stemming from a long tradition of introducing audiences to imaginary worlds through maps (Wolf, 2012). Here, however, the map has been subsumed into the UI; the paper map is no longer needed. The historical role of paratexts as thresholds of interpretation (Genette, 1997) is barely invoked in *Skyrim*. It would be rash to proclaim the end of the paratext as a world-introducing tool based on its neglect in *Skyrim*. However, *Skyrim* shows how digitally-distributed games sideline paratexts.

### 5.5 Broader world-building structures

Primary and supportive world-building components are commonly inter-related in broader structures. Wolf's (2012) framework of core infrastructural elements provides a categorisation of these structures.

This framework proposes nine infrastructural elements, including the narrative, maps, timelines, genealogies, nature, culture, language, mythology, and philosophy. Wolf's framework seems to operate at multiple levels; while nature and culture are infrastructural elements of the imaginary world, others like maps, timelines and genealogies seem more like tools contributing to wider infrastructural elements, geography and history respectively. Wolf appears aware of this issue, as subsequently in the same text (2012, p. 193) he refers to geography and history, rather than maps or timelines. Robertson (2017) also identifies timelines as an element of history.

Wolf's (2012) infrastructural element of philosophy poses a different challenge, as this element transcends the imaginary world, connecting it to the philosophy of the world's creator. Philosophy is two things, not necessarily connected: the philosophical views of its inhabitants, and the philosophical views of the creators. For example, when *TES* designer Ken Rolston notes the thematic importance of melancholy in his works (Remo, 2009), he appears to invoke a philosophical view of the RPG as a longing for the past, connecting to Eco (1987b) discussion of the modern tendency to re-imagine the Middle Ages. But Rolston's melancholy does not inform any diegetic philosophical construct, even though it is frequently manifested through exposition of lost civilisations (Remo, 2009). The philosophies of the authors connect to implementational strategies rather than with the game world, while diegetic philosophies connect to diegetic religions and mythologies. For this reason, philosophy is broken into two constituent parts, one of which is relegated to the next section on implementational strategy, while the other is subsumed into the religion and mythology component. The revised matrix of world-building structures is presented as Table 14.

Broad world-building structure	Original Wolf (2012) terminology	Structural contents
Quests and narrative	Narrative	Main narrative and quest, minor narratives and quests, micro-narratives, NPCs, factions, dialogues, random events and characters, embedded storytelling
Geography and nature	Map, nature	Maps, road networks, settlements, landscape, natural resources, biomes, food chains, climate and weather, natural resources, diseases
Society and history	Timelines, genealogies	History books, families, factions, dialogues, ownership and crime, random events and characters
Culture	Culture, language	Spoken language, dialogues, writing systems, books, music, behaviours, art, settlements and people
Religion and mythology	Mythology, philosophy	Magic, cult objects, priests, religious and mythological books, gods, religious quests

Table 14 Broad world-building structures based on Wolf (2012)

Overall, the author renamed two infrastructural elements, and merged four pairs of infrastructural elements into larger entities. Each of these structures is now examined separately.

### 5.5.1 Quests and narrative

The narrative of *Skyrim* is a spider-web of different narratives of varying lengths, casts, and narrative gravitas. Many, though not all, narratives are expressed through quests, including epic deeds (Howard, 2008), but also minor tasks structured through the quest log.

The main narrative line introduces the player into the game world (JS 1-4). It then provides a chain of quests and guides players on a tour of *Skyrim*'s most significant locations and characters. The main quest line also leads players through a series of quest hubs (Totten, 2014) which signal other potential activities and encourage broader exploration. Individual quests also propel players from one quest hub to another, exposing them to additional side quest opportunities along the way.

Four levels of quests and narratives were identified (e.g. JS 3): the main narrative, major side quest lines stemming from the player's interaction with significant NPCs and factions, minor one-off quests involving micro-narratives for background NPCs, and finally the non-quest micro-narrative, where a small story exists without a quest. For example, a seemingly harmless old woman, whose isolated cabin invites investigation and reveals her as a witch (JS 7).

The quest and narrative structure of *Skyrim* can be likened to a tree, with a main trunk leading to progressively narrower but more numerous branches, culminating in a multitude of leaves. Continuous exposure to new branches encourages players to engage with more of the imaginary world.

### 5.5.2 Geography and nature

*Skyrim*'s spatial structure replicates the narrative organisation by providing the player with large locations leading to progressively smaller locations, linked together through a network of roads. The landscape is a game world interface element (Jørgensen, 2013) with informative and interactive functionality. The world contains nine holds (JS 5), large geopolitical segments each with a capital city and smaller satellite settlements. Each hold is also characterised by a different natural environment, as well as different gameplay and narrative affordances, including factions. Players wishing to explore different faction quests choose not only between factions, but between geographic locales.

It is common for linear imaginary world narratives to depict a journey from one end of the map, through all its important locations, culminating somewhere on the other end (Wolf, 2012); the author can neglect the parts of the map with no relevance to the story. By contrast, an open-world game must provide the player with options and opportunities. Consequently, while *Skyrim*'s main narrative

facilitates the world tour, other narrative opportunities demand some parts of the world are neglected in the tour, leaving exploration opportunities. In the research journal, the author documented how even prior to reaching Riverwood, he found himself being drawn to explore other spaces of opportunity (JS 3). Totten (2014) discusses the same area of *Skyrim* to exemplify how open-world games deploy geographic digressions to foster exploration.

*Skyrim*'s organisational geography has a fractal quality, with similar centre-periphery patterns existing on multiple levels. The province works firstly as a complete entity, with key holds serving as province-level centres, and the rest serving as hinterlands. In turn, each of the nine holds has a capital like Whiterun (JS 8-10) and hinterlands, with smaller hamlets like Riverwood (JS 4-5) serving as sub-capitals with their own hinterlands populated by dungeons and isolated households. Finally, cities and settlements are structured with focal points where service and quest hubs as well as key NPCs are situated, and less important areas on the peripheries.

*Skyrim* is miniaturised in scale. While the province occupies one ninth part of a content, this area is reduced in the game to 14 square miles (Evans-Thirlwell, 2017), squeezing a wide range of environments together. Cities are equally reduced; the author did not count, but Whiterun (JS 8-10) seemed to have less than 50 inhabitants. This miniaturisation is described by one of *Skyrim*'s artists as gameplay impressionism (Liesegang, 2014), creating the impression of a larger world through small-scale means. Travel time is not a concern mentioned in the journal: everything is in walking distance.

The natural landscape of *Skyrim* is also subjugated to the concerns of encouraging multi-directional explorations. During the gameplay recorded in the research journal, the player was first carted through the dense conifer forest mountain surroundings of Helgen, a hinterland of the Falkreath Hold (JS 1-3), before entering the Whiterun hold dominated by open tundra (JS 7). The transition between these areas is blended to avoid arbitrary shifts; Riverwood's area (JS 4-6) is an extension of Falkreath's forests (JS 1-3, 11), transitioning into tundra immediately in the basin around Whiterun. If the researcher were to continue the journal to inspect other key holds, similar patterns would be observed. A more global pattern also exists, with the south being more temperate than the north. Altitude also plays a role, with local weather cold spots concentrating around mountains. Impressionist miniaturisation brings together not only landmarks, but also weather patterns. In the journal, the author recorded a trip from Riverwood, situated in a narrow gorge, up the mountain to Bleak Falls Barrow; with the crossing of the snowline halfway up the mountain, the weather rapidly changed into a snowstorm (JS 5-6).

Another guiding principle for *Skyrim*'s landscape was what *Skyrim* art director Matt Carofano calls epic reality (Game Informer, 2011); epic reality squeezes landmarks together to surround the player with

powerful vistas. The landscape draws the player not only in its two-dimensional layout, but also its vertical dimension which serves to visually expose or conceal elements. The early game uses the landscape to visually draw players towards Riverwood (JS 3). Paths and downward slopes visually lead the player to inviting sights such as Bleak Falls Barrow on the horizon (Image 16), while upward slopes and natural barriers blocking line-of-sight, discourage the exploration of other routes. The landscape constitutes a set of visual push and pull factors channelling player activities.



Image 16 Visually drawing the player towards Riverwood in Skyrim (Special Edition)

Beyond landscape, nature in *Skyrim* is organised around visual verisimilitude. The primary world-building components making up nature are static, and rely on the principle of minimal departure (Ryan, 1980) to convey the impression of greater complexity; players observe the components of nature in the game world, and infer additional information from their similarity to real-world counterparts. In the case of the animal world, world interaction events are used to ground otherwise relatively randomly-behaved animals in the natural landscape (e.g. JS 11).

*Skyrim's* geography and nature appears to be structured around three concerns. The first concern is to organise the world in such a way as to continually invite additional exploration by providing a fractal geography of progressively smaller hubs connected by networks, and replicating and reinforcing multiple levels of the narrative structure. The second concern is to create a convincing environment where miniaturisation and gameplay impressionism compress a much larger geographic area into a

relatively small map, explorable in a manageable timeframe by players. Finally, the third concern is to create the impression of a more dynamic and deeper simulation of nature by visual verisimilitude and dynamic scripts.

### 5.5.3 Society and history

*Skyrim* lacks the official timelines and databases Wolf (2012) mentions for other imaginary worlds as the most important organising structures for the socio-historical aspects of an imaginary world. Early in *TES* history, *Daggerfall* presented such timelines and genealogical trees, but the subsequent shift towards subjective history documented in Chapter 3 rendered such structures undesirable.

*Skyrim* conveys society and history through a multitude of grounded experiences. The player reconstructs an image of the world's social and historical structures from forcibly subjective and fragmentary sources. For example, in the early game (JS 1-4), the player is confronted with throw-away references to events, individuals, or groups only explained much later, or only outside of *Skyrim*. The game invites players to satisfy their curiosity by examining other *TES* products.

The core of *Skyrim*'s grounded sources are the NPCs, whose behaviours and often-conflicting dialogues allow the player to learn and infer knowledge of past events as well as present organisation. NPCs are organised into tangible structures of families (e.g. JS 8-9) and factions (e.g. JS 8, 10). The player may observe factions as a bystander, or join a faction to experience its internal workings, in the spirit of ethnographic participant observation (DeWalt & DeWalt, 2011).

*Skyrim* includes more than 100 random world interaction/encounter scripts (GG, pp. 674-680) which are used to trigger NPC behaviours, helping to convey an illusion of a functioning social system. For example, should the player injure an NPC, one of the NPC's relatives may subsequently confront the player and demand an apology. Many other random world encounters are used to build further complexity, allowing the player to encounter warfare between factions, post-battle situations where an Imperial patrol leads a group of bound Stormcloak prisoners, and more peculiar interactions, such as a farmer leading a specially-painted cow into a giant's camp as a peace offering; a guard will demand the player to pick up a dropped weapon; an NPC will hand a dropped item back to the player (Livingston, 2011), and so on.

Another aspect of the social world is the ownership and crime system. When players take an item marked as belonging to an NPC will result in guards being called if it had been witnessed, leading to confrontation and possible punishment (e.g. JS 11). Assaulting an NPC without provocation is also a crime. The system is simple and lacks in nuance, but gives players insight into the imaginary world's attitudes towards ownership, law enforcement, and forms of punishment.

Further insight into the social and historical world of *Skyrim* is provided through books and other media such as songs and art, already examined as primary world-building components. These sources are similar to NPCs, as they too, are intentionally fragmentary and subjective. In this sense, the social and historical organisational infrastructure of *Skyrim*'s world can be described as the controlled chaos of being dropped as a participant in an unfamiliar society. Understanding in this system is achieved not through timelines or genealogies, but through immersive participant observation.

#### 5.5.4 Culture

*Skyrim*'s exploration of culture largely conforms to Wolf's (2012) descriptions of other examples of world-building. The game's opening is structured to explicate, if not justify the player's relative ignorance of local events and culture (JS 1-4). It is almost necessary for the hero in an imaginary world to be, at least to some degree, a fish out of water, so as to provide an excuse for the audience to receive explanations of the world (Wolf, 2012); in RPGs like *Skyrim*, this becomes even more important as the player character literally has no past, serving as a blank slate for the player (Whitlock, 2012). However, unlike the imaginary worlds of linear media, the player is free to role-play a better-oriented character by not seizing on opportunities to ask questions. When talking to Hadvar or Ralof and their families in Riverwood (JS 4), players may ask questions about local customs and events, or ignore such opportunities. Later conversations, like the Jarl of Whiterun (JS 9), provide similar options.

Players learn fragments of culture from NPCs, from books, and through the world's architecture and arts. Access to these resources is optional; in the recorded play, the author encountered many books, but only actually read a handful (e.g. JS 9). By contrast, where the author tried to talk to all encountered NPCs, other players will ignore many NPCs, or simply miss them. Education scholar Gee (2006) argues many games employ a just-in-time approach to knowledge that improves learning by providing information only in the appropriate context, in contrast to more traditional approaches to teaching where information is provided long before it is needed. *Skyrim* rejects both strategies, instead embedding the player in a cultural world that poses questions, but mostly refuses to readily provide answers. Subjects are intentionally broken up into multiple sources distributed throughout the game. One example of this approach is the language of dragons. The player encounters the dragon language at 47 different word wall sites (Image 17) across *Skyrim* (UESP, Wall), each containing a short segment of text (e.g. JS 6). In a separate location during the main narrative, the player is given a 'Rosetta stone' in the form of a scholarly book (UESP, Dragon). about the dragon language, but learning all the available words of the language remains a daunting task that, ironically, is easiest achieved by resorting to external sources such as the UESP or the game guide (GG, pp. 1096-1099), which for once provides the sort of well-organised linguistic appendix common to other imaginary worlds (Wolf, 2012).





*Image 17 A Word Wall commemorating the dead in dragon writing in Skyrim (Special Edition)*

The main narrative is an exception to the chaotic distribution of cultural knowledge. Culture, like all other aspects of the *Skyrim*'s world-building, is subjugated to the main narrative; whenever the player needs to understand a given custom, legend, fragment of language or even work of art, this information is provided through obligatory dialogues (e.g. JS 1-2, 9). The narrative is again the trunk from which the player may explore additional branches and leaves; these, however, are supplied in the form of controlled chaos. As in the case of the social aspect, the process of understanding language and culture resembles ethnographic participant observation.

### 5.5.5 Religion and mythology

From the perspective of world-building, religion, mythology, and philosophy serve as an additional layer of culture, underpinning, supporting, and justifying the other layers (Wolf, 2012). However, while real myths are mysterious and unclear (Alexander, 2017), fantasy worlds often treat mythology as pre-history (Wolf, 2012), a time poorly documented, yet fundamentally factual. It can be speculated the existence of direct divine intervention (JS 8), makes mystery problematic. Magic especially can be rigid, as world-builders are compelled to lay out the rules of what is possible and impossible with magic to maintain dramatic tension (Eddings & Eddings, 1999); this is even more true in the case of video games with their procedural logic, and there is even a book (Howard, 2014) about designing magic for video games as a system of rules.

*The Elder Scrolls* has a considerable body of mythological and religious lore, sufficient to attract scholars of mythology and religion (cf. Ode, 2012; Tuckett, 2013; Sirangelo, 2014; Wise, 2014). The player's access to this aspect of world-building infrastructure is similar to that offered for the social and cultural aspects, relying on NPCs, books, art, and environmental and procedural storytelling at sites of religious significance (e.g. JS 10). *Skyrim*'s narrative also involves direct interaction with mythological figures; *Skyrim* places the player in the middle of an eschatological narrative (Torbeck, 2014). The nature of the spiritual world in *Skyrim* is reinforced by the procedural rhetoric of efficacious prayer and magic (JS 8).

However, despite the spiritual certainties of *Skyrim*, the game's religious and mythological infrastructure is again designed to mislead and obfuscate. The intentional obfuscation is best illustrated by those aspects of myth that have little gameplay relevance and therefore can be depicted in multiple conflicting accounts. The world's creation story exists in different versions across different cultures, described in the game world by a diegetic scholar in the book "The Monomyth" (JS 10; see also Zeigler, 2014). The book's title, referencing the works of mythology scholar Joseph Campbell (2008), seems to convey a clear message: the ultimate truth about the mythology of *TES* is as inaccessible for the world's inhabitants, as it is in the real world.

The examination of *Skyrim*'s implementation of the world-building infrastructural systems identified by Wolf (2012) has shown a web of relationships between primary world-building components, within and across the infrastructural systems, which together build up the game's environmental, social and cultural world. At this point, it is possible to infer an implementational strategy employed by *Skyrim*'s creators to build this imaginary and virtual world.

## 5.6 Implementational strategy

An examination of *Skyrim*'s implementational strategy requires a return to the other half of Wolf's (2012) philosophy infrastructure, the philosophical views of the world-builders. In the same way Tolkien's Catholic beliefs led to an orderly world permeated by Catholic thought (Castronova, 2017), so the views of the creators of *TES* can be expected to have influenced *Skyrim*. *TES* is in many ways post-modern; the series does not deny the existence of truth, but the possibility of *knowing* the truth is an entirely different matter. Rolston, whose design direction for *Morrowind* and *Oblivion* seem to have left a permanent mark on the series, acknowledges pushing for a splintered approach to truth:

*"That would be my influence, [...] I wanted it to be a value of The Elder Scrolls, that there were at least four explanations that were mutually compatible with the facts, but strongly conflicting with one another. Because I felt that created*

*a world that was interesting and had the same feel of uncertainty that the real world has.”* (K. Rolston, personal communication, October 14, 2017)

There is a conviction an imaginary world should be difficult to understand, and expository information affected by the subjective views and interests of the individuals presenting it. Rolston was not involved with *Skyrim*, but the earlier sections of this chapter demonstrate how subjectivity continues to drive the implementation of world-building in *Skyrim*. A subjective world is deprived, at least from the audience’s perspective, of many of the means world-builders use to present a coherent world, such as timelines with clear causal chains of history (Robertson, 2017). Subjective worlds demand multiple sources of information that can clash.

Other underpinnings of implementation relate to the idea an open-world RPG where players are free to do what they choose, a philosophy laid out in *Arena* (Majewski, 2017b). An open world organised for freedom of exploration must be interesting and enticing to explore. There must be different paths of progression for different playing styles; *Skyrim*’s developers accept most players will miss parts of the game (Peckham, 2016).

The implementational tactics identifiable in *Skyrim* are divisible into two overlapping areas. The first of these concentrates around the subjectivisation and parcellation of world knowledge, while the second concerns the orientation of the world towards exploration. Some of the exploration-oriented tactics also address the technological challenges associated with interactivation (Wolf, 2012), the implementation and presentation of an imaginary world as an interactive virtual world.

### 5.6.1 Knowledge management tactics

The strategic emphasis on subjectivity and free-form exploration of an open world leads to several lower-level tactics used to achieve the overall objectives; these are divided into tactics minimising or maximising player knowledge exposure (Table 15).

Knowledge management tactic	Maximalist or minimalist?
Minimalism of knowledge	Minimalist
Maximalism of knowledge	Maximalist
Situated learning	Both
Procedurally evoked knowledge	Both
NPC swarms and multilateral approaches to knowledge	Both
Intertextuality	Both

Table 15 Knowledge management tactics

The first tactic is minimalism of knowledge, where the player is perpetually starved of details. The research journal repeatedly highlighted situations (e.g. JS 1) where information was poorly contextualised, event references without explanations, and so on. The world respects the player as an intrinsic part of the world, and does not provide explanations unless the player asks. Minimalism drives players to seek out other information sources and encounter multiple subjectivities.

The player is given gameplay information through situated learning typical to games Gee (2006). There are on-the-go tutorials, for example smithing being explained when the player first uses a forge (JS 5).

Much of the cultural world is experienced directly through procedurally evoked knowledge. For example, the difference between two types of armour is learned in practice. Such comparisons lead players to infer the deeper cultural differences leading to the creation of these artefacts.

Paradoxically, another tactic is maximalism of knowledge. Most *Skyrim* books are used to clutter the world with unnecessary background information. Many books are fictions within the fiction (e.g. JS 6). NPCs readily reveal information either directly to, or in the presence of the player; it is impossible to visit a marketplace in a *Skyrim* town without learning. This maximalism amplifies world-building saturation to the level of overflow (Wolf, 2012; 2016b). However, it is availability of knowledge that is maximised, rather than direct exposure, i.e. unnecessary exposition.

The simultaneous commitment to minimalism and maximalism of knowledge is embodied by the tactic of NPC swarms and multilateral approaches to knowledge (JS 4). NPCs offer fragmentary knowledge, but different NPCs provide different information fragments. In Riverwood, players learn from various characters about a break-in, the same information embellished in different ways (JS 4). Whiterun's rift between the Gray-Manes and Battle-Borns is explicated piecemeal across many conversations (JS 8-9). On the largest scale, understanding the civil war in *Skyrim* involves many books and NPCs across the whole province. Minimalist starvation is alleviated by the promise of new revelations and perspectives from other NPCs. There are also many NPC vignettes playing out irrespective of the player's position and other nearby events, literally preventing a player from catching everything, and forcing continued engagement (see esp. JS 9).

The tension between minimalism and maximalism extends beyond *Skyrim* through intertextuality. Different *TES* products provide additional windows and revelations into the world (Wolf, 2012) and different media take advantage of their respective affordances (Schut, 2007). The introduction rewards committed players with enhanced understanding through lore not available in *Skyrim*, for example about the Thalmor (JS 1). Conversely, the player is bombarded with information irrelevant to *Skyrim*, but shedding light on other *TES* products, especially through recycling of books (Appendix J). The books

themselves are intertextual and intermedial, as they describe the imaginary world in literary form (Wolf, 2012).

### 5.6.2 World exploration tactics

Another set of tactics is employed to encourage exploration and structure it (Table 16).

World exploration tactic	Key aim
Extended introductory sequence	Structure-building
Geographic dispersal and networking	Encourage exploration
Fractal geographic design	Structure-building
Impressionist gameplay	Scope rationalisation
Multiple levels of redundancy	Encourage exploration
Procedural extension of functionality	Encourage exploration

Table 16 World exploration tactics

The first of these is the extended introductory sequence. *Skyrim's* introductory sequence incorporates an entire dungeon (JS 1-2); it is also linear, leading some game critics to argue the game's intro exemplifies how an open-world game should *not* be started because it doesn't leverage its open-world nature (Extra Credits, 2012). However, the introductory sequence, seems to be designed specifically to avoid leaving players to their own devices too early, to gradually introduce them to the world's affordances (JS 2). Even after the introductory dungeon, the landscape propels the player along a path to the first narrative goal of Riverwood (JS 3-5), then the first major dungeon (JS 6), and finally to Whiterun (JS 7-10). Each location presents new gameplay affordances, new information, and new quest opportunities, in progressively larger quantities, ensuring continued engagement after the player is 'released'. The problem of initial information overload, a risk when exposing audience to radically different cultures (Wolf, 2016b), a challenge that would exist in indigenous cultural contexts, is avoided, as is the danger of player confusion when released too quickly without enough guidance.

The player's subsequent exploration is structured through geographic dispersal and networking. Different biomes, quests, and factions, are distributed geographically to force players looking for new threads in the world's narrative fabric (Wolf, 2012) to explore new geographic areas. A network of hubs and peripheries linked through geographic and narrative paths facilitates movement, but also draws the player aside to unexpected new opportunities along the way (Totten, 2014), aided by the game's radar system (JS 3). The game's fractal geographic design extends the geographic dispersal concept. Thus, the networked hub-periphery structure can be observed on the global level of the province, the regional level of the holds, and the local level of the hold capitals and hamlets. Dividing the world into repeatable

structures also facilitates the process Wolf (2016b) describes as chunking, the organisation of world-building knowledge into hierarchical units of knowledge.

The variation in biomes and opportunities demands the illusion of a large area, but technological and gameplay constraints demand a small area navigable by the player with relative ease, and populated by the designers without resorting entirely to procedural generation techniques. This balance is achieved through Liesegang's (2014) impressionist gameplay. Liesegang explains the impression of bigger scale is achieved through optical effects suggesting landscape elements are further away than they are, as well as by pretence, where sources describe Whiterun as a large city far beyond its visible scale and populace. Impressionist gameplay is augmented by the relatively common game technique of projecting play time into fictional time at a different speed (Juul, 2005): the player walks across the map in about an hour of play time (Evans-Thirlwell, 2017), but the trip takes several days of fictional time.

Finally, players are encouraged into exploration and diverse play options through multiple levels of redundancy and procedural extension of functionality. The gameplay varies greatly when different skills are used to the same goal, for example using magic instead of swordplay in combat (JS 2, 6). There are optional social activities, from wooing potential spouses to buying different houses or adopting children. Different factions explore different types of side quests. Many small quests are constructed from elements are procedurally combined into coherent wholes using the so-called Radiant quest system (UESP, Radiant). Different world encounters/interactions (e.g. JS 11) can be generated based on the same conditions, making it challenging to encounter every possibility (GG, pp. 674-680). Finally, there is an excess of detail in consumable items such as foods and alchemy ingredients, with extensive functional overlap, allowing players to mix and match different ingredients to achieve the same objective (GG, pp. 146-149). The player is constantly overwhelmed with options and redundancies, resulting in passionate long-term engagement with *Skyrim* as a game and as an imaginary world.

### 5.6.3 The world-building gestalt

The analysis of world-building features presented here leaves out one issue: from the perspective of the player, *Skyrim* is not a set of features but a whole and unitary entity. The audience experiences the narrative and the world holistically, through the gestalt effect, a psychological concept Wolf (2012) imports into his study of imaginary worlds. The gestalt effect relates to the manner a whole object is perceived as something other than the sum of its parts; the human imagination fills in components that may exist out of sight, or may not exist at all but are still inferred to be there. An analogous idea can be found in the comic book concept of closure, where a set of images are combined into a whole in the reader's mind (Tanenbaum, 2008). Juul (2005) also notes many games have incoherent fictional worlds,

but players will not find them incoherent if the gameplay provides the whole experience with a sense of direction.

The gestalt effect is important when considering how players perceive *Skyrim*'s often basic attempts at building the illusion of a dynamic natural, social and cultural environment in the context of the random world interactions/encounters creating an illusion of activity. The various redundancies of the game world, such as the multitude of NPCs engaging in scripted vignettes at different times, ensure the social hubs of cities feel like places of activity.

These facts perhaps shed light on the discrepancies in judgement between players and scholars on the sense of presence offered by *Skyrim* and its predecessor, *Oblivion*. Champion's (2007;2008) and Tanenbaum's (2008) assertions *Oblivion* fails as a social and cultural world are well-backed by evidence, as is Champion's (2015) subsequent rejection of *Skyrim* as a cultural world. Nonetheless, players ignore the artifice and, in the act of playing, see these games as convincing worlds (e.g. Livingston, 2011; Novotny & Bates, 2012), as indeed do scholars (e.g. Tuckett, 2013; Wise, 2014). Presence is subjective; it is an impression, a *feeling of being there* (Champion, 2007; Steuer, 1993). Thus, presence may be augmented by illusion, as well as through the highlighting of those features that work well and drawing attention away from the flaws. It is this effect *Skyrim* relies on to inject a sense of dynamism into its generally static world; for heritage, the gestalt effect is also a pertinent reminder a heritage world need not be complete to be convincing. Indeed, the gestalt effect would function in heritage even when not desired, as interpretation of heritage depends on audience background and experiences, sometimes against the wishes of the curators (Smith, 2006).

## 5.7 Conclusion

How does *Skyrim* construct its virtual world, allowing players to experience tangible and intangible heritage in its environmental, social, and cultural aspects? One answer is that it doesn't: as Granström (2013) notes, *Skyrim* is fantasy, and not heritage. However, *Skyrim* does convey the fictional heritage of an imaginary world. From the perspective of Wolf's (2012) conceptualisation of imaginary worlds, being able to successfully convey culture is a crucial element of world-building. *Skyrim*'s imaginary world-building does allow players to experience tangible and intangible heritage.

The implementation of CH maps to the concept of environmental, social and cultural presence. The more powerful the sense of presence, the more effectively can heritage be conveyed in the form of VH (Champion, 2015). *Skyrim* as a world-building entity employs 22 primary world-building components ranging from the landscape to NPCs and books, all contributing to environmental, social or cultural

presence, or to two or three types of presence. Two extra-diegetic components, music and UI, play a supportive and facilitative role in world-building, although a third, paratexts, was relatively unimportant.

Like other imaginary worlds, *Skyrim* is organised around the world-building infrastructures identified by Wolf (2012), which are implemented through specific strategies and the tactics employed by the game's creators. The world revealed itself to be strongly developed, with the environment, society and culture all addressed in complex ways by their corresponding infrastructures. The strategy used to implement it relied on a range of smaller tactics combined to realise two goals: a world continually resisting the player's efforts to obtain reliable knowledge, and in turn continually demanding and driving player exploration.

The subsequent sections summarise how these components and structures function in the context of the six sub-questions of RQ1.

#### 5.7.1 Q1\_1: How does *Skyrim* depict its environmental world as a static entity?

*Skyrim*'s static environment may be the most evocative aspect of the game purely through its visual grandeur (JS 3). A variety of identifiable biomes exists in *Skyrim*, defined through landscapes and flora. The static environment is constructed mainly from four primary world-building components, including the static landscape, natural resource worksites, interactive vegetation, and interactive static wildlife. Other primary components, such as dungeons, also contribute in lesser ways. The primary components are organised through geography into a fractal mosaic of landscapes facilitating exploration.

#### 5.7.2 Q1\_2: How does *Skyrim* simulate its environmental world as a dynamic entity?

*Skyrim* does not attempt to simulate a dynamic environment with seasonal changes or any complex relationships within the ecosystem. However, many smaller environmental elements inject a sense of dynamism into the landscape. The primary world-building components contributing here include dynamic water, environmental simulation, soundscapes, weather and day/night cycles, interactive wildlife, and diseases. The soundscape stands out as a powerful background element (JS 3), while in the foreground, weather (JS 1, 5) and animal life (JS 11) are significant, if illusory, markers of dynamism.

#### 5.7.3 Q1\_3: How does *Skyrim* depict its social world as a static entity?

At the heart of the social world are the NPCs and their dialogues; these are the primary world-building components used to establish *Skyrim*'s social world. Apart from being able to directly observe NPCs, the game also imparts additional information about society through description within books and dialogues. Subjectivity and unreliable sources are consciously highlighted to force players to engage with multiple narrations of society. The game conveys a sense of ethic and class diversity for its cities without speaking literally to these aspects, by placing particular NPCs in particular roles (e.g. JS 8).



It may be surprising to consider NPCs a static element, given their continual activities; however, the bulk of these activities is static: NPCs follow daily schedules, have pre-designed dialogue capabilities, never grow old or have children. NPCs will have arguments depicted in marketplace vignettes, but they will come back the next day for the same argument (JS 9). Nonetheless, the amount of small details around NPCs, and their capacity for a broad range of pantomimes visualising everyday activities, goes a long way towards depicting a social world.

#### 5.7.4 Q1\_4: How does *Skyrim* simulate its social world as a dynamic entity?

The dynamism of *Skyrim*'s society revolves entirely around the NPCs' reactions to the player; as the narrative agent of change, the player may trigger events that change society and its individual representatives. Completing a quest may result in befriending an individual, or opening an avenue towards marriage (e.g. JS 4, 7). Other quests may generate bigger changes, such as the player being woven into the social fabric of a city as a thane (JS 9), or being noted by guards for past accomplishments, skills. Another primary world-building component contributing to the social world is disease, largely inefficacious, but generating reactions from NPCs (JS 7). Ultimately, the dynamic aspects of *Skyrim*'s social world are illusory, revolving only around responses to the player.

#### 5.7.5 Q1\_5: How does *Skyrim* depict its cultural world as a static entity?

The static culture of *Skyrim* is depicted through a variety of primary world-building components, including songs and music, static architecture, dungeons, interactive architecture, artificial worksites, and a variety of artefacts and items, including knowledge artefacts like books. All buildings and items serve to evoke a sense of culture through their appearance and aesthetic design (e.g. JS 6), including even so-called 'clutter' decorating interiors (e.g. JS 9). Usable items also employ procedural characteristics to convey cultural differences. As in the case of society, culture is depicted in a subjective and fragmented manner, replicating the impression of being immersed in a foreign country. *Skyrim*'s culture is also evoked by association and external reference, such as the use of Scandinavian nomenclature in Nordic culture, or the use of culturally evocative names for NPCs (JS 10).

The overall depiction of culture in *Skyrim* is often shallow, as in the case of the limited range of bardic performances, but all-encompassing. In this sense, *Skyrim* illustrates Mortimer's (2011) argument for historical fiction: to create *Skyrim*, its developers had to consider and develop large cultural infrastructures (Wolf, 2012) like philosophy, myth, religion, or history, but also small details like food and agricultural crops, herbal lore, clothing, or interior decorations.

### 5.7.6 Q1\_6: How does *Skyrim* simulate its cultural world as a dynamic entity?

*Skyrim* does not attempt to simulate dynamic culture. Only the most limited effort devoted to creating an illusion of cultural change and player cultural productivity, in the form of new bardic performances (GG, pp. 413-414).

With each of the sub-questions of RQ1 addressed, the final step for this study is to consider the heritage implications of the findings.

### 5.7.7 Cultural heritage implications

*Skyrim*, in accordance with Granström's (2013) smaller study, is a strong benchmark for serious games interested in enhancing their depiction of CH by incorporating commercial game techniques.

Granström's concern about the disparity between serious game budgets and *Skyrim*'s \$80 million remains; however, a notable connotation emerging from observations about *Skyrim*'s geographic dispersal and fractal design is the world's scalability. If *Skyrim* were constrained to one hold area of its map, the player would not be able to spend 300 hours in it; possibly more details would be needed to ensure the desirable saturation and overflow of world-building information assisting vicarious immersion in the imaginary world (Wolf, 2012; 2016b). However, the virtual world would retain all its basic features; *Skyrim* could be scaled down to suit a smaller budget. More importantly, the analysis of *Skyrim*'s world-building components provides other researchers with an array of tools that can be incorporated piecemeal into their works, as well as a set of well-tested implementational tactics.

Not all aspects of *Skyrim*'s world-building are relevant to all CH projects, and considering *Skyrim*'s limitations, any given CH project is likely to find *Skyrim*'s toolbox to be inadequate in some aspects. For example, as Champion (2015) notes, there are many ways in which the implementation of NPC reactions to player behaviour could be improved, if one were creating a game where social etiquette is important.

The primary concern of this research is to examine what can be gleaned from *Skyrim* for the area of Australian Aboriginal CH. A detailed discussion on this would be premature without the context provided by the expert interviews presented in Chapter 7. However, the analysis of *Skyrim* does reveal resemblances between the knowledge practices embedded in *Skyrim* and those typical to traditional Aboriginal societies.

Chapter 2 highlighted five key characteristics of Aboriginal knowledge identified by Christie (2008). Aboriginal knowledge according to Christie is:

1. Embedded in routine practices; while some knowledge is codified, most is performative, and learned by doing.

2. Connected to the natural environment, concentrating on knowledge most relevant at the local level.
3. Owned and regulated by law.
4. Collective, so a given item of knowledge is owned and distributed by a group.
5. Responsive and active, constantly changing for the present.

Yunkaporta and McGinty (2009) also identify several educational practices well-aligned with Aboriginal epistemologies, including self-direction, self-regulation, social support, connectedness to the world, narrative, and cultural knowledge; all of these are well-aligned with Christie's argumentation, with the general practices of video games (Gee, 2006), and of *Skyrim* in particular. The localness, embeddedness of Aboriginal knowledge is also an argument for Leavy (2014), in favour of using virtual worlds for storage of data in lieu of more typical databases and encyclopaediae.

For each of the five points Christie (2008) laid out, *Skyrim's* world-building offers a counterpart. On the first two points, the world is best learned through local interaction, observation and performance of appropriate practices grounded in the local environment. As an imaginary world, *Skyrim* is above all an ethnographer's world: designed to be observed immersively from a first-person perspective. The game also grants the virtual world a sense of virtual tangibility and direct experience (Schut, 2007; 2016) without equivalent in non-interactive media. For *Skyrim* and other similar RPGs, the manner of experiencing the game world is not only aligned with the good educational practices identified by Gee (2003; 2006), but above all, it is a direct form of participation. Players become participant observers (DeWalt & DeWalt, 2011) to understand their surroundings. There is an ethnographic feel to experiences like stepping out into the city marketplace in Whiterun, and taking stock of the multiple conversations surrounding the player, differing in subject matter, emotional load, closeness of relationship between participants, and ideologies revealed. There is also an ethnographic feel to observing other everyday activities, and assessing the range of affordances by personally engaging in production. However, where the ethnographers and anthropologists are outsiders who may reside in a society for a time, but remain outsiders (e.g. Malinowski, 1988; Aiston & Horne, 2009), *Skyrim* facilitates direct engagement in the society in question, sidestepping the player's external origins through conventions of play. The player learns about society and culture as an engaged insider who must personally talk to others and learn ways of doing in the right contexts and locations. To learn about *Skyrim's* natural resource affordances, the player may talk to local experts, but above all, must go into the countryside personally. The player learning to hunt and gather from the land, to know where given resources are going to be available, connects strongly to Aboriginal knowledge practices (Christie, 2008; Yunkaporta & McGinty, 2009; see

also Stanner, 1979). Had the game incorporated a possibility to permanently over-exploit resources, players would even find value in learning how to exploit their environment without exhausting it.

Christie's (2008) third and fourth points, ownership, regulation, and group control of knowledge, are embodied in *Skyrim* by the faction system; the research journal did not document much of the faction experience, but the author did join the Companions, a guild of warriors. Entering the group through a performative procedure (JS 10), the author was admitted to a narrower field of knowledge; in time, he would be privy to the uttermost secrets of the Companions, such as their lycanthropic nature (GG, pp. 237-246). The need to deal directly with groups and individuals to obtain knowledge is highlighted by the subjectivity of knowledge. When players wish to learn about culture or society in *Skyrim*, often even the sources purporting to be objective, turn out to be just one side of the equation, forcing players to investigate, to seek out other points of view, *to ask*. Often, individual NPCs in a swarm only deliver parts of the same story chunk to the player, forcing players to ask around not even to get additional points of view, but to complete one point of view.

Christie's (2008) fifth point, the responsive and active nature of Aboriginal knowledge, is more problematic: *"What becomes sequestered on a database or a DVD or a book is only ever already a trace of some encounter, waiting to be called on as a resource in a new knowledge production episode"* (Christie, 2008, p. 274). Even if *Skyrim* were a fully functional simulation, it would not be a responsive society, but a digital simulation of a responsive society based on static knowledge. However, the responsive and active nature of knowledge can at least be illustrated through pre-designed changes. *Skyrim* depicts changes in limited ways but significant scope through pre-designed narrative events and quest lines. The destruction of Helgen and the re-emergence of dragons (JS 1-2) is a dramatic change, and the player's subsequent revelation as the Dragonborn triggers cultural responses in songs. These changes do not make *Skyrim*'s culture responsive and active, but they visualise how it might behave if it were responsive and active.

The findings of this chapter provide an analysis of *Skyrim*'s world-building tools, but are not sufficient for a broader examination of the potential application of open-world RPGs like *Skyrim* for heritage. Consequently, the results of the survey of *Skyrim*'s player community are now examined, to consider how enabling community engagement could impact the transmission of cultural heritage through RPGs.

# Chapter 6: *The Elder Scrolls* audiences

## 6 *The Elder Scrolls* audiences

This chapter reports the results of the survey forming the second study, conducted in response to Research Question 2 (RQ2) is broken down into nine sub-questions (Q2\_1 through to Q2\_9) as presented here.

2. How and why do *Skyrim* players explore and popularise cultural heritage presented in RPG worlds through participation in online passionate affinity spaces?

- a. Who are the participants of *Skyrim*'s online PAS?

Q2\_1: What are the basic characteristics of PAS participants, particularly compared to overall player demographics?

Q2\_2: Are there any observable differences between passive consumers, encyclopaedists (lore-based), and modders (modding-oriented)?

- b. Why do they participate in the PAS?

Q2\_3: Are encyclopaedists for single-player games like *Skyrim* more interested in the world's lore as opposed to gameplay than is indicated in studies of MMO games like *World of Warcraft*?

Q2\_4: Are modders motivated primarily by the possibility of extending *The Elder Scrolls* world, or the possibility of self-expression regardless of the game world?

- c. How do they perform their activities in the PAS?

Q2\_5: How do encyclopaedists operate, and how do their practices change with level of engagement?

Q2\_6: How do modders operate, and how do their practices change with level of ability?

- d. To what degree is their engagement related to the game's cultural content rather than the game itself?

Q2\_7: Is there a relationship between long-lasting encyclopaedist PAS involvement and higher levels of engagement with the game's cultural content?

Q2\_8: Is there a relationship between long-lasting modding PAS involvement and higher levels of engagement with the game's cultural content?

The survey contained 87 questions. Twenty-nine were general for all participants, including two test questions filtering out invalid respondents, 10 demographic questions aiming to establish demographic characteristics of the respondents, and 17 player history questions aiming to identify the extent of the respondent's engagement with the *TES* series in general, and with mod and lore consumption in particular. Subsequently respondents were presented with two specialised sets of questions, a 31-question set restricted to respondents who reported working on mods (modders) and a 27-question set restricted to respondents who reported contributing to The Unofficial Elder Scrolls Pages (UESP) wikipedia site (encyclopaedists). A respondent could qualify both as a modder and as an encyclopaedist, and respond to both sets.

The survey was prepared for deployment using the online platform Qualtrics. Conditional questions and question sets were employed, where a response to a previous question would cause the respondent to skip certain questions or be asked additional questions. Test\_01 provided age demographic data, and was also used to exclude under-18 respondents from further participation in accordance with the ethics protocol. Test\_02 ensured respondents had played *Skyrim*, as only *Skyrim* players were a part of the survey target group. Respondents who had not played *Skyrim* were still invited to respond to the remaining demographic questions, on the assumption their response to the survey presumed some sort of *TES* experience. However, only one respondent reported no *Skyrim* experience, and their responses to the demographic questions were frivolous; consequently, this response was removed from the data set.

The survey was deployed on March 3<sup>rd</sup> 2017 at the two primary sites, one mod-oriented PAS, Nexus Mods, and one lore-oriented PAS, The UESP. Explanatory notes about the survey were posted at the community forums of these sites. The administration of both sites was supportive to the survey, but did not choose to post survey information on the sites' front pages.

Initial deployment yielded fewer than 100 respondents; community engagement was quantitatively weak, but qualitatively strong, with experienced participants including site administrators. Some respondents expressed an interest in the raw survey data, leading the author to secure university ethics approval for a subsequent open data release.

To expand participation, the survey was deployed to approved additional secondary sites: the *Skyrim* Reddit pages<sup>69</sup>, Bethesda's *Skyrim* forum<sup>70</sup>, AFK Mods<sup>71</sup>, and TES Alliance<sup>72</sup>. Informal conversations were

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<sup>69</sup> <https://www.reddit.com/r/skyrim/>, <https://www.reddit.com/r/teslore/>

<sup>70</sup> <https://bethesda.net/community/>

<sup>71</sup> <https://afkmods.iguanadons.net/>

<sup>72</sup> <http://tesalliance.org/forums/index.php>

held with *TES* players at other sites including Dark Creations<sup>73</sup>, the Steam *Skyrim* fora<sup>74</sup>, and the Tamriel Rebuilt Discord channels<sup>75</sup>, inviting them to join the survey through the primary sites. Once community interest had dissipated, the survey was closed. The three-month (84 days) deployment, from March 3<sup>rd</sup> to May 26<sup>th</sup>, 2017, yielded 370 responses.

Responses were processed in Qualtrics and in SPSS Statistics 24. Many incomplete responses shared IP addresses with subsequent complete responses, indicating a returning user. For this reason, 35 incomplete responses were removed as invalid. Sixty-two other responses were removed due to the age constraint, and one frivolous response was removed. After data qualification, 273 valid responses remained, short of the target  $n=1000$ . The sample size suggested the active community was smaller than anticipated, or many potential participants ignored the survey.

SPSS was also used to recode short-answer country of residence responses. Various country names were entered in multiple forms, which were merged into one form per country. In some cases, where responses were not clear or jocular (e.g. *Skyrim*), latitude, longitude and IP address data was used to identify actual country of residence.

SPSS was used to tabulate and review the clean data for the entire sample. Qualtrics was used to generate data reports for sample subsets, including the passive consumer, modder and encyclopaedist populations, which were cross-tabulated in SPSS. In most cases where variables were cross-tabulated, the number of response categories produced few observations in some cells. Even after collapsing categories, most cross-tabulations violated assumptions necessary to make inferences about the significance of the findings (Fienberg in Byrkit, 1987, p. 501). The goal of this study is exploratory rather than predictive, therefore chi square statistics are not reported. For frequencies, the standard error of the proportion is 0.03 producing a minimum confidence interval of 0.059.

The following section of the chapter summarises the survey results as they correspond to each of the research sub-questions. The full, uncondensed survey data is presented in Appendix E.

## 6.1 Who are *Skyrim* online PAS participants?

Two RQ2 sub-questions were posed about the general identity of *Skyrim*'s PAS participants (Table 17).

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<sup>73</sup> <https://www.darkcreations.org/>

<sup>74</sup> <https://steamcommunity.com/app/72850/discussions/>,  
<http://steamcommunity.com/app/489830/discussions/>

<sup>75</sup> <https://discordapp.com/channels/132891272666021888/132891272666021888>



	RQ2 Component	Survey Questions
<b>Who are the participants of Skyrim's online PAS?</b>	Q2_1: What are the basic characteristics of PAS participants, particularly compared to overall player demographics?	Test_01, Dem_01- Dem_10 Hist_01-17 Lore_01-02
	Q2_2: Are there any demographic differences between encyclopaedists (lore-based) and modders (modding-oriented)?	Dem_01-Dem_10, Hist_01-17 Mod_01, Lore_03

Table 17 The distribution of survey questions across RQ2 components (Q2\_1-2)

### 6.1.1 Q2\_1: Are PAS participants demographically different compared to overall player demographics?

The responses to the first sub-question were drawn from the survey's demographic and player history sections, the latter providing background about respondents' history of *TES* engagement.

#### 6.1.1.1 Demographics

The demographic questions asked about age, gender, country of residence, level of education, and employment status (Table 18).

Factor	Category	Percentage	Number
<b>Age</b>	Below 18*	19	62
	18-24	40	135
	25-34	26	87
	35 and over	15	52
<b>Gender</b>	Male	76	207
	Female	19	52
	Other / Rather not say	5	14
<b>Region of residence</b>	Anglosphere	66	181
	Europe	28	77
	Rest of world	6	15
<b>Level of education</b>	High school	49	133
	Undergraduate	39	105
	Postgraduate	12	34
<b>Employment status</b>	Student	40	109
	Employed full-time	27	74
	Limited employment	14	38
	No formal employment	19	52
<b>Game industry employment</b>	Yes, or used to be	3	9
	No, but aim to be	14	39
	No	82	225

Table 18 Basic demographic data

\*Excluded from further study

Where the statistical gamer in the US (Entertainment Software Association, 2017) and Australia (Brand, Todhunter, & Jervis, Digital Australia 2018, 2017) is in the mid-30s, the sample's median age group was 18-24. Fewer than 25% of sample was aged over 35. More than 75% of respondents were male, compared to near-parity for statistical gamers. However, both results were consistent with Johnson's (2013) general study of *Skyrim* players.

All the PAS sites under investigation are English-speaking, and more than two thirds of respondents come from the US or other English-speaking countries. The next largest group were the Europeans, from both Western and Eastern Europe. Only five percent of the sample came from the rest of the world.

Education and employment data were consistent with age group findings. Full-time employment comprised 27% of the sample, with another 13% being part-time employed or freelancers. Respondents with direct game industry involvement were few, but 14% of the respondents aimed to enter the games industry in the future.

Remaining demographics questions interrogated scholarly engagement in the games or cultural heritage industries, and the relationship between *TES* interest and field of study (Table 19).

Factor	Category	Percentage	Number
Education: games	Yes	3	8
	Pursuing	9	26
	No	88	239
Education: heritage	Yes	9	26
	Pursuing	4	10
	No	87	236
<i>TES</i> influence on study	None	67	182
	Small	11	30
	Moderate	11	31
	Very Strong	5	13
	Reverse	6	17

Table 19 *TES* and education

Under 15% of respondents were engaged in games industry-related or cultural heritage-related studies. Most heritage students in the survey already had degrees, while most game students were pursuing their degrees. A third of the respondents reported their interest in *TES* had at least a small influence their choice of studies, while six percent indicated their field of study influenced their interest in *TES*. Those who indicated *TES* influence on their studies outside of heritage and games were invited to report their chosen field; the results were scattered, with only computer science (2.6%) being statistically

significant. Respondents reporting an influence of *TES* on their studies could optionally explain this influence in short responses. Among 11 responses, two dominant types were that *TES* as a game inspired interest in games development, and that *TES* inspires interest in world-building due to its complex world.

#### 6.1.1.2 *TES* engagement history

PAS participant identity was further explored in questions about *TES* engagement history. Respondents reported their *Skyrim* history, entry into *TES*, and gameplay or game world preference (Table 20).

Factor	Category	Percentage	Number
Weekly <i>Skyrim</i> time	None	24	65
	0-10 hours	44	121
	11-20 hours	19	53
	21-40 hours	8	23
	41 or more hours	3	9
	No response	1	2
Series entry title	Pre-Morrowind	6	17
	Morrowind	30	82
	Oblivion	29	80
	Skyrim	34	94
Total <i>Skyrim</i> play time	0-50 hours	1	3
	51-100 hours	4	10
	101-200 hours	12	33
	201-300 hours	9	24
	300 or more hours	74	201
	No response	1	2
Gameplay vs. world valuation	Gameplay	5	13
	Both equally	40	108
	World	55	152

Table 20 Respondent history with *Skyrim* and *TES*

More than two thirds of respondents reported playing *Skyrim* for over 300 hours in total, but weekly play times were low; more than two thirds of the respondents either did not play the game at all, or played less than 10 hours per week. Most respondents valued the imaginary world of *TES* more than its gameplay, or equally appreciated both. Only five percent expressed a preference for gameplay.

63% of *Skyrim*'s PAS participants were introduced to the series by *Skyrim* or *Oblivion*. However, when asked about total *TES* exposure (Figure 12), participants indicated their engagement expands backwards into older titles.

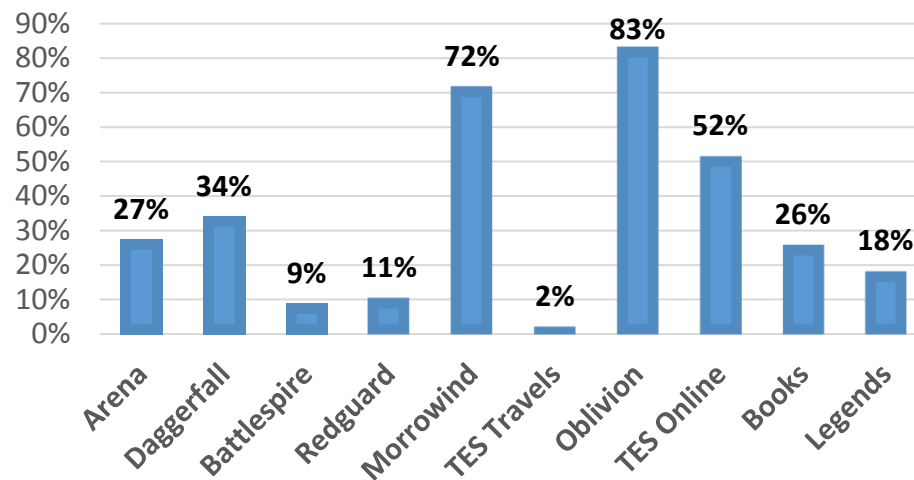


Figure 12 Total TES exposure. Skyrim = 100%

For example, because only 36% reported series entry with *Morrowind* or pre-*Morrowind* titles, of the 72% who reported playing *Morrowind*, at least 36% are players introduced to *TES* through *Oblivion* or *Skyrim*, who then sought out the older *Morrowind*.

#### 6.1.1.3 Mod consumption and preferences

Engagement history also included passive consumption of mods and mod type preferences. Participants reported their mod usage (Table 21).

While 90% of *Skyrim*'s overall player population has never used mods (Bethesda Game Studios, 2015), only nine percent of the sample did not use mods with *TES* games. Half reported playing *TES* games with more than 51 mods active at any one time. Most respondents had downloaded at least 101 mods in their entire *TES* engagement history, and 30% downloaded more than 500 mods.

Respondents typically obtained their mods through Nexus Mods, as expected given Nexus was a key data collection site. Less than half of the sample also obtained mods through Steam or individual modder sites. Respondents could also select "other" and specify a site. Several *TES* PAS sites were mentioned, including Bethesda.net<sup>76</sup>, AFK Mods, Dark Creations, TES Alliance, ModDB<sup>77</sup>, and Morrowind Modding History<sup>78</sup>, but the most common response (n=10) pointed to Loverslab, a site oriented to pornographic/sexual mods (Majkowski, 2016).

<sup>76</sup> <https://bethesda.net/>

<sup>77</sup> <http://www.moddb.com/>

<sup>78</sup> <http://mw.modhistory.com/>

Factor	Category	Percentage	Number
How many mods typically with TES?	None	9	25
	1-20 mods	26	70
	21-50 mods	15	41
	51+ mods	50	137
Mod download sites used	Nexus Mods	86	234
	Steam Workshop	33	89
	Modder sites	37	101
	Other	21	56
Total TES mods downloaded	0-50 mods	15	42
	51-100 mods	11	30
	101-250 mods	21	58
	251-500 mods	16	43
	500 or more mods	27	75
	No response	9	25
Care if mods are lore-friendly?	Not at all	18	48
	Neutral	13	37
	Strongly	60	163
	No response	9	25
Mod preferences: new content vs. improvements	New content	19	52
	Both equally	41	111
	Improvements	31	85
	No response	9	25

Table 21 Mod consumption and preferences

Mod users overwhelmingly signalled a strong concern about lore-friendliness. There was also a visible preference for mods improving existing content compared to adding new content, although the most common response was equanimity. The survey next drilled into specific mod preferences (Table 22).

Factor	Category	Percentage (most used)	Number (used)*	Number (most used)
Mod types used / most often used	Patches & revisions	48	827	119
	Equipment & small items	13	543	31
	New locations	12	516	30
	Quests	8	195	20
	NPC-related	8	755	19
	Landscape & architecture	6	375	14
	Other	3	33	8
	Books & culture	1	143	3
	Cheats	1	98	2

Table 22 Respondent mod preferences

\*Numbers can exceed 100% of sample as multiple categories were collapsed for clarity

Mods were broken down into 21 categories based on existing categorisation at Nexus and Steam. For purposes of visualisation, these categories were aggregated into larger groupings. Most respondents had used a wide range of mods, but when asked to identify their preferred mod type, almost 50% chose the aggregated patches and revisions category. Among the least used mod types were cheats, and mods adding books or other cultural content.

Respondent attitudes towards mod commercialisation were examined by asking if they donate money to modders, and if they think modders should be able to sell mods. Most (66%) respondents never donated, and only 14% had done so more than once or twice. Only 16% said modders should be able to sell mods. Additionally, 51 respondents selected the text-box response option to provide more detailed views, an indication of intense discussion, which however is beyond the scope here.

#### 6.1.1.4 Lore consumption

The final set of engagement history questions examined online lore usage. This area was explored in five questions. The first three asked about online lore usage in general. Eighty percent of the respondents read *TES* lore online. Intensity of lore usage is lower than mod usage; fewer than ten percent read lore for more than ten hours per week. However, 43% reported high or very high levels of expertise, and 40% reported a medium level of knowledge. When indicating most preferred lore article type (Figure 13), 40% indicated history, with other, more game-specific categories typically attaining around ten percent each.

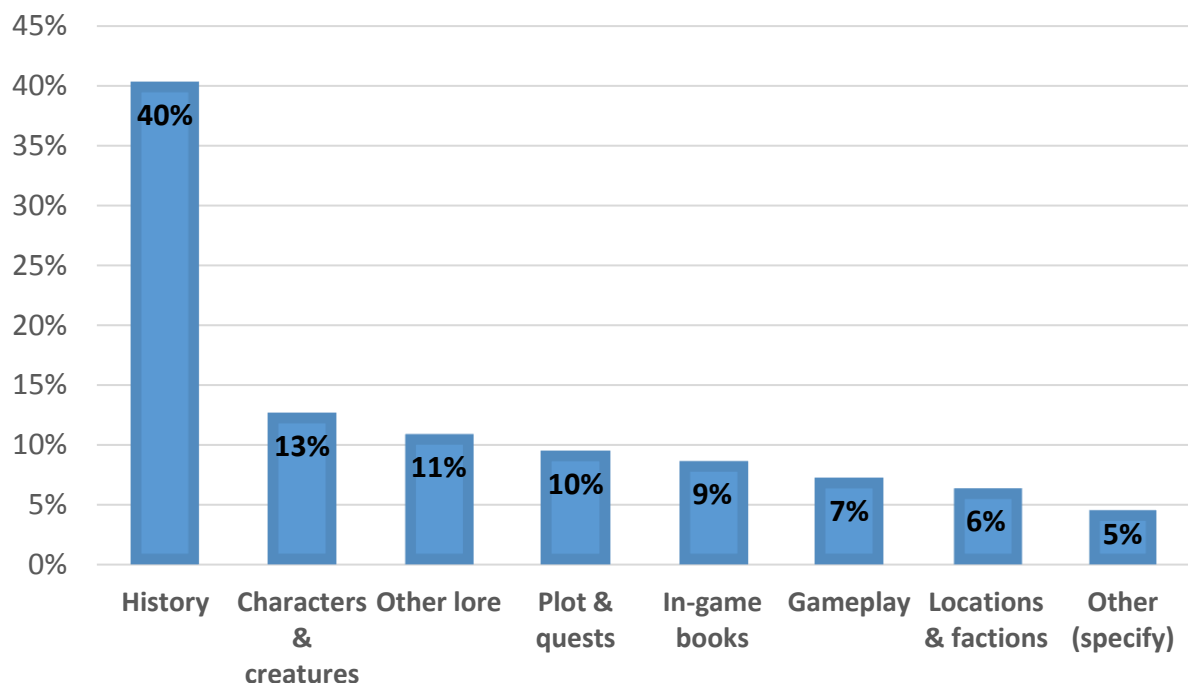


Figure 13 Most often read lore article types

Finally, the opening questions from the survey's lore section examined lore consumption at the UESP (Figure 14).

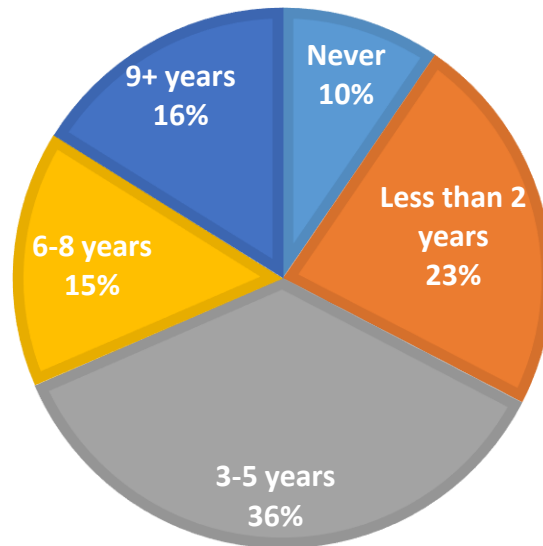


Figure 14 Timespan of UESP usage

Most (90%) respondents had visited the UESP. Two thirds had been visiting for at least three years, and 30% have visited the UESP for six years or longer, i.e. since the release of *Skyrim*.

#### 6.1.2 Q2\_2: Are there any characteristic differences between consumers, encyclopaedists and modders?

The second sub-question re-examined the demographic and engagement history data broken down into groups based on type of engagement: active encyclopaedists, active modders, active modder-encyclopaedists combining both activities, and finally a group who only participate passively. The initial modding and lore questions identified active modders and encyclopaedists (Table 23).

		Lore - Inactive	Lore – Active	Total
Have you ever worked on any TES mods?	No	113	18	131
	Yes	113	29	142
Total		226	47	273

Table 23 Sample breakdown based on engagement type (active modders/encyclopaedists shaded orange)

The sample included 160 active participants (113 modders, 18 encyclopaedists, 29 modder-encyclopaedists), versus 113 passive respondents who were a part of the community, but not

productive in either modding or lore. The active participants were compared with the passive group (Table 24).

Factor	Category	Percentage (active)	Percentage (passive)	Number (active)	Number (passive)
Age	18-24	41	62	65	70
	25-34	36	25	58	28
	35 and over	23	13	37	15
Level of education	High school	45	54	72	61
	Undergraduate	43	32	69	36
	Postgraduate	12	13	19	15
Series entry title	<i>Pre-Morrowind</i>	8	4	13	4
	<i>Morrowind</i>	34	25	54	28
	<i>Oblivion</i>	34	22	55	25
	<i>Skyrim</i>	24	50	38	56
Total <i>Skyrim</i> play time	0-50 hours	1	1	2	1
	51-100 hours	4	3	7	3
	101-200 hours	4	13	6	15
	201-300 hours	11	16	18	18
	300 or more hours	80	67	128	76
	<i>No response</i>	1	0	2	0
Gameplay vs. world valuation	Gameplay	3	8	4	9
	Both equally	38	42	60	48
	World	60	50	96	56
How many mods typically with <i>TES</i> ?	None	8	12	12	13
	1-20 mods	24	27	39	31
	21-50 mods	13	18	21	20
	51+ mods	55	43	88	49
Weekly time spent reading lore online	None	15	25	24	28
	0-10 hours	72	68	115	77
	11-20 hours	6	6	10	7
	21 or more hours	7	1	11	1
Lore expertise	Very low	4	6	6	7
	Low	10	15	16	17
	Medium	35	47	56	53
	High	32	27	51	30
	Very high	19	5	31	6

Table 24 Key demographic and engagement differences between active and passive participants



Passive respondents were younger and less likely to hold an undergraduate or postgraduate degree<sup>79</sup>. They also displayed a briefer and less intensive span of engagement, played less, and used fewer mods. Active participants valued the game world over gameplay, spent more time reading lore, and reported higher levels of lore expertise. Active participants were more willing not only to continue their engagement by trying new products, but also reaching for older products (Figure 15).

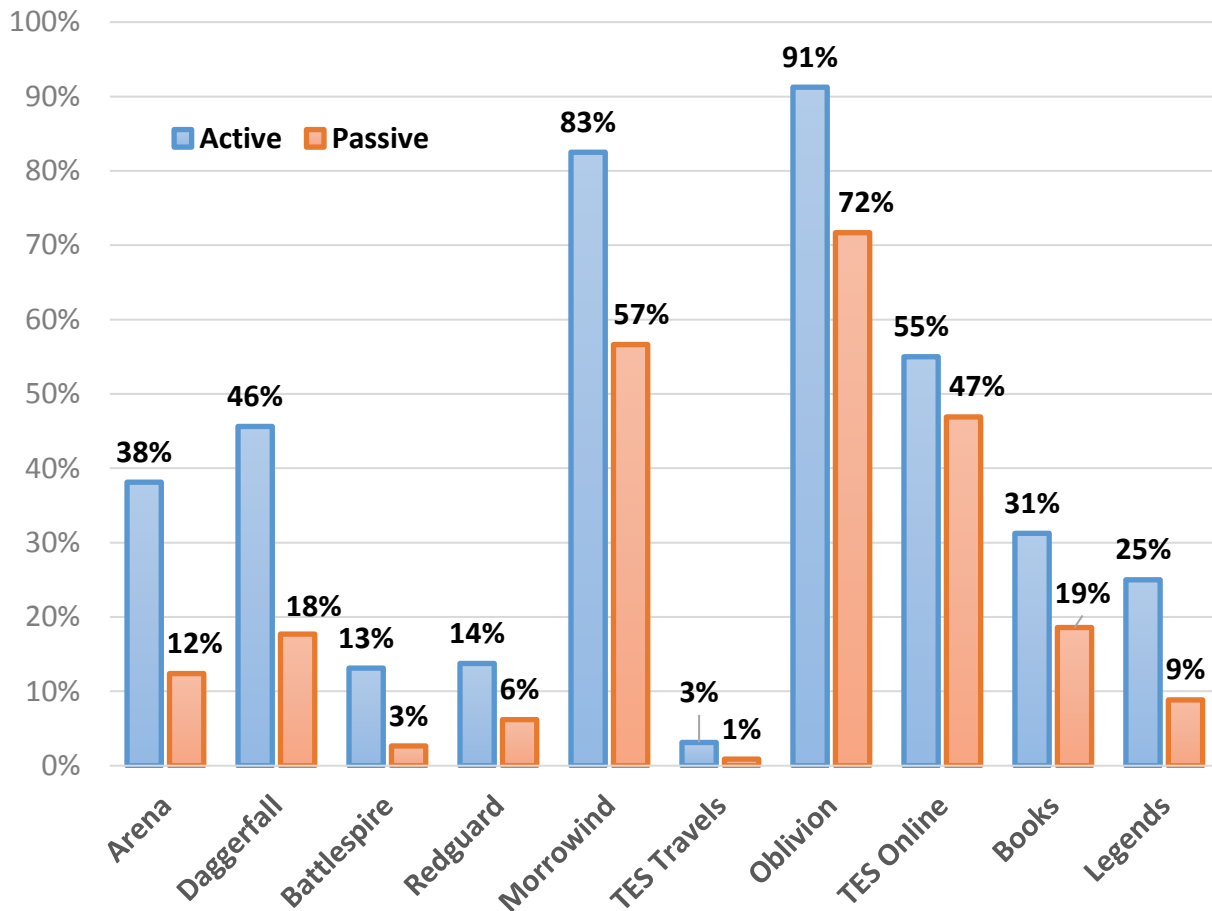


Figure 15 Total TES engagement (active/passive participants). Skyrim = 100%

Only 8% of the active participants had been introduced to *TES* prior to *Morrowind*, but many went back later, as 46% reported playing *Daggerfall*, and 38% played *Arena*; the corresponding figures for passive participants were 18% and 13%. Active participants were more willing to seek out obscure *TES* products like *Battlespire*, *Redguard*, and the *TES Travels* games, and were early adopters of new products; 25% reported playing *TES Legends*, which at the time was in limited beta release, compared with nine

<sup>79</sup> However, the only three PhDs in the survey were in this group. The author suspects his supervisors and colleagues may have contributed there, but blast! They're valid participants.

percent for passive participants. The only spin-off with similar engagement for both groups was the MMORPG *The Elder Scrolls Online*.

Breaking down the active participants into encyclopaedist and modder samples was problematic. The disproportionately small encyclopaedist sample made it difficult to draw any conclusions from the differences between these groups. There were actually more respondents who engaged in both practices, than pure encyclopaedists. Nonetheless, some observable differences existed (Table 25).

Factor	Category	Percentage (lore)	Percentage (both)	Percentage (mod)	Number (lore)	Number (both)	Number (mod)
Age	18-24	44	66	34	8	19	38
	25-34	33	24	40	6	7	45
	35 and over	22	10	27	4	3	30
Series entry title	<i>Pre-Morrowind</i>	6	10	8	1	3	9
	<i>Morrowind</i>	28	24	37	5	7	42
	<i>Oblivion</i>	39	38	33	7	11	37
	<i>Skyrim</i>	28	28	22	5	8	25
Weekly <i>Skyrim</i> playing time	None	67	34	26	12	10	29
	0-10 hours	22	48	36	4	14	41
	11-20 hours	6	3	23	1	1	26
	21-40 hours	6	14	4	1	4	4
	41 or more hours	6	0	4	1	0	4
	No response	0	0	2	0	0	2
Total <i>Skyrim</i> play time	0-50 hours	0	0	2	0	0	2
	51-100 hours	0	7	4	0	2	5
	101-200 hours	22	7	11	4	2	12
	201-300 hours	6	0	4	1	0	5
	300 or more hours	72	86	77	13	25	87
	No response	0	0	2	0	0	2
How many mods typically with <i>TES</i> ?	None	33	10	3	6	3	3
	1-20 mods	61	38	15	11	11	17
	21-50 mods	0	24	12	0	7	14
	51+ mods	6	28	70	1	8	79
Weekly time spent reading lore	None	0	0	21	0	0	24
	0-10 hours	61	72	73	11	21	83
	11-20 hours	11	17	3	2	5	3
	21 or more hours	22	10	3	4	3	3
Lore expertise	Very low	0	3	4	0	1	5
	Low	6	0	13	1	0	15
	Medium	33	24	38	6	7	43
	High	33	38	30	6	11	34
	Very high	28	34	14	5	10	16

Table 25 A selection of demographic and personal history between encyclopaedists, modder-encyclopaedists, and modders

The modder-encyclopaedist sample included only one female, while the modder and encyclopaedist samples matched the 70/30 male/female ratio of the total sample. Lore participants spent the least weekly time playing *Skyrim*, followed by the modder-encyclopaedist sample, with the modder participants spending the most time. Most modders used more than 51 mods at any time, modder-encyclopaedists used fewer mods, and pure encyclopaedists were the least likely to use mods.

Encyclopaedists favoured patches and improvements over the greater mod variety used by the other two groups. Conversely, encyclopaedists spent more time reading lore, followed by the modder-encyclopaedists, and finally the modders, some of whom reported reading no lore online.

## 6.2 Breaking down encyclopaedist and modder sample groups

The subsequent sub-questions examined in this chapter concerned only encyclopaedists and modders. The modder-encyclopaedist sample was included in both groups. For the purposes of identifying differences at varying levels of engagement, both modders and encyclopaedists were first sub-divided based on self-reported levels of activity and expertise. These are presented here.

### 6.2.1 Encyclopaedist sub-groups

47 participants actively contributed to the UESP, including the 29 modder-encyclopaedists. Participants were asked to report their levels of activity, and could describe themselves as somewhat active (making only minor changes), reasonably active (making some major or numerous minor changes), very active (making many major changes), or as UESP administrators (Figure 16).

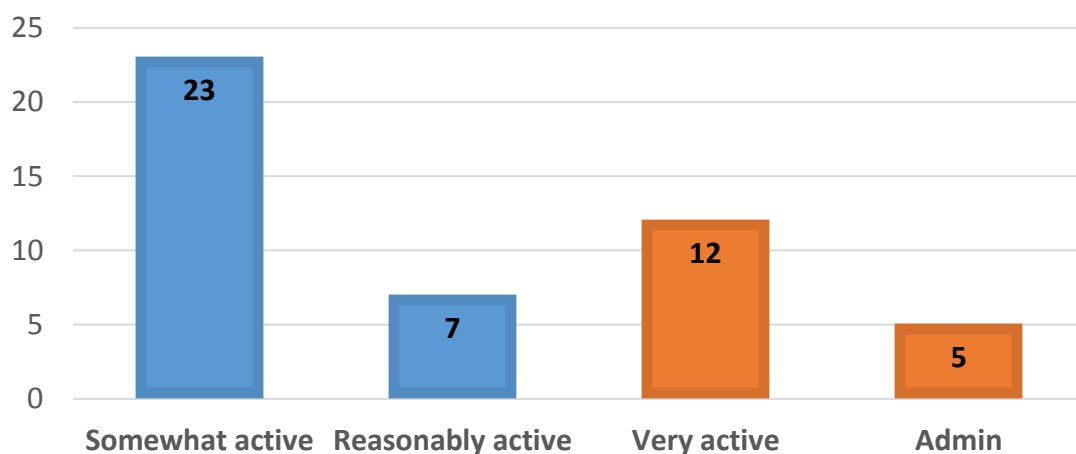


Figure 16 Lore engagement levels for active participants

For analysis, the four levels of activity were consolidated into two: less active (30 respondents) comprising of the somewhat and reasonably active respondents, and more active (17 respondents), comprising the very active and admin respondents.

### 6.2.2 Modder sub-groups

142 participants were active modders, including 29 modder-encyclopaedists. Modders were asked to report their level of expertise on a five-point scale from very low to very high (Figure 17).

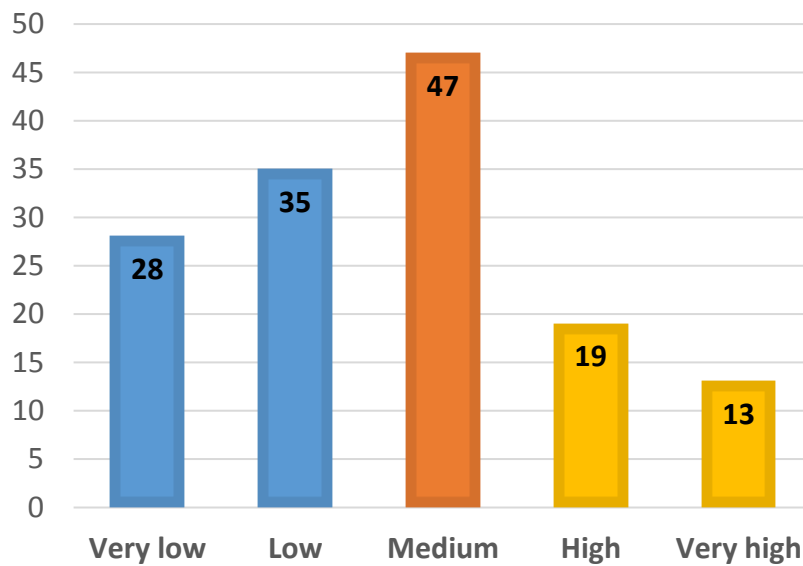


Figure 17 Self-assessed modding skill levels among active participants

For analysis, the five skill levels were consolidated into three: low (63 respondents), comprising the very low and low respondents, medium (47 respondents), and high (32 respondents), comprising the high and very high respondents.

The subdivisions of modder and encyclopaedist samples presented here were employed in analysis for all the following sub-questions of RQ2.

### 6.3 Why are participants in PAS?

Two RQ2 sub-questions were posed about the motivations of *Skyrim*'s PAS participants, one for encyclopaedists and one for modders. The responses were drawn from the lore and modding sections of the survey respectively (Table 26).

	RQ2 Component	Survey Questions
Why do they participate in the PAS?	Q2_3: Are encyclopaedists for single-player games like <i>Skyrim</i> more interested in the world's lore as opposed to gameplay than is indicated in studies of MMO games like <i>World of Warcraft</i> ?	Lore_15-Lore_16
	Q2_4: Are modders motivated primarily by the possibility of extending <i>The Elder Scrolls</i> world, or the possibility of self-expression regardless of the game world?	Mod_14-19

Table 26 The distribution of survey questions across RQ2 components (Q2\_3-4)

### 6.3.1 Q2\_3: Are encyclopaedists more interested in lore or gameplay?

Encyclopaedists were asked to list all their motivations for UESP involvement, and point to one key motivation (Figure 18).

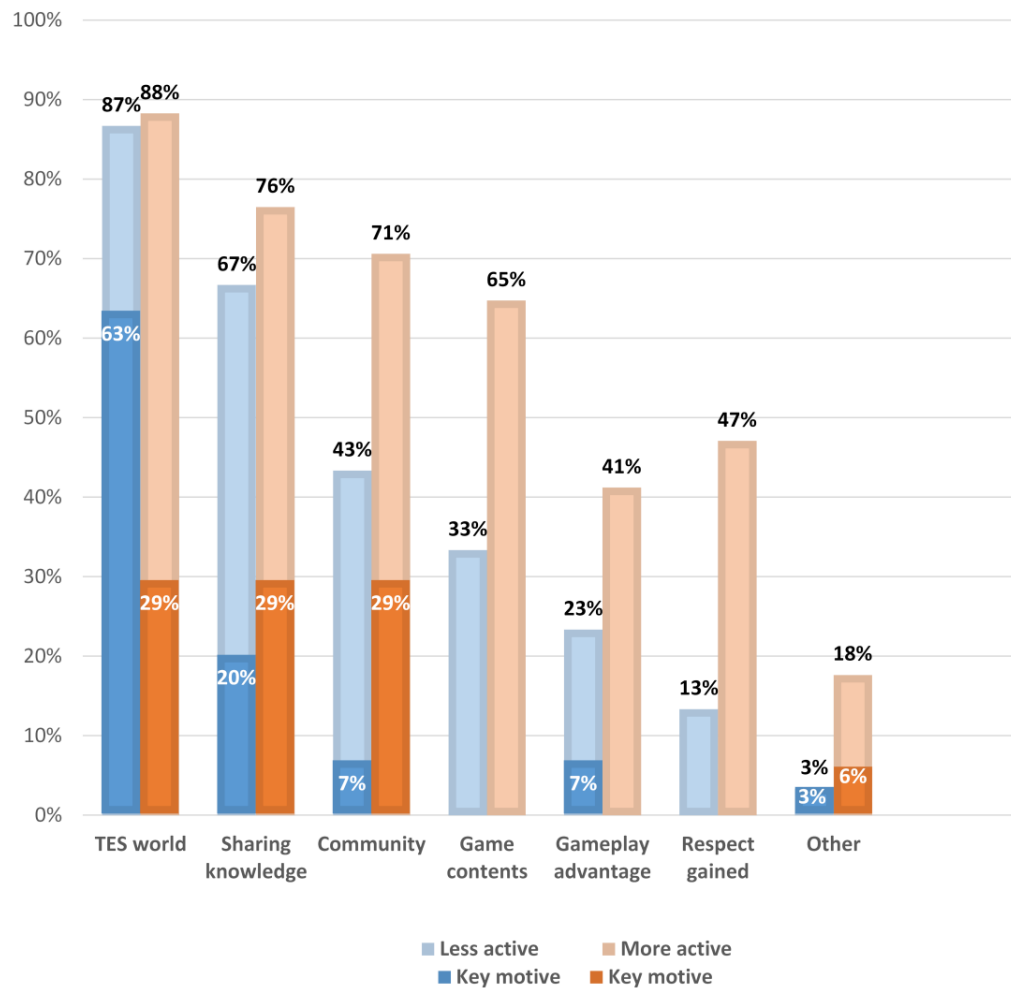


Figure 18 Participant motivations for UESP involvement

Both groups were highly engaged with the *TES* world and the community, and did not consider gameplay as a high priority. For less active users, learning about the *TES* world was the top priority, with community enjoyment and sharing knowledge far behind. However, very active users were only as likely to point to the *TES* world as the most important motivation as they were to the community and the opportunity to share knowledge with others.

### 6.3.2 Q2\_4: Are modders motivated by the *TES* world, or by self-expression?

Modder motivations were examined in two stages. First, modders were asked to identify all their motivations for modding, and point out the single most important motivation (Figure 19).

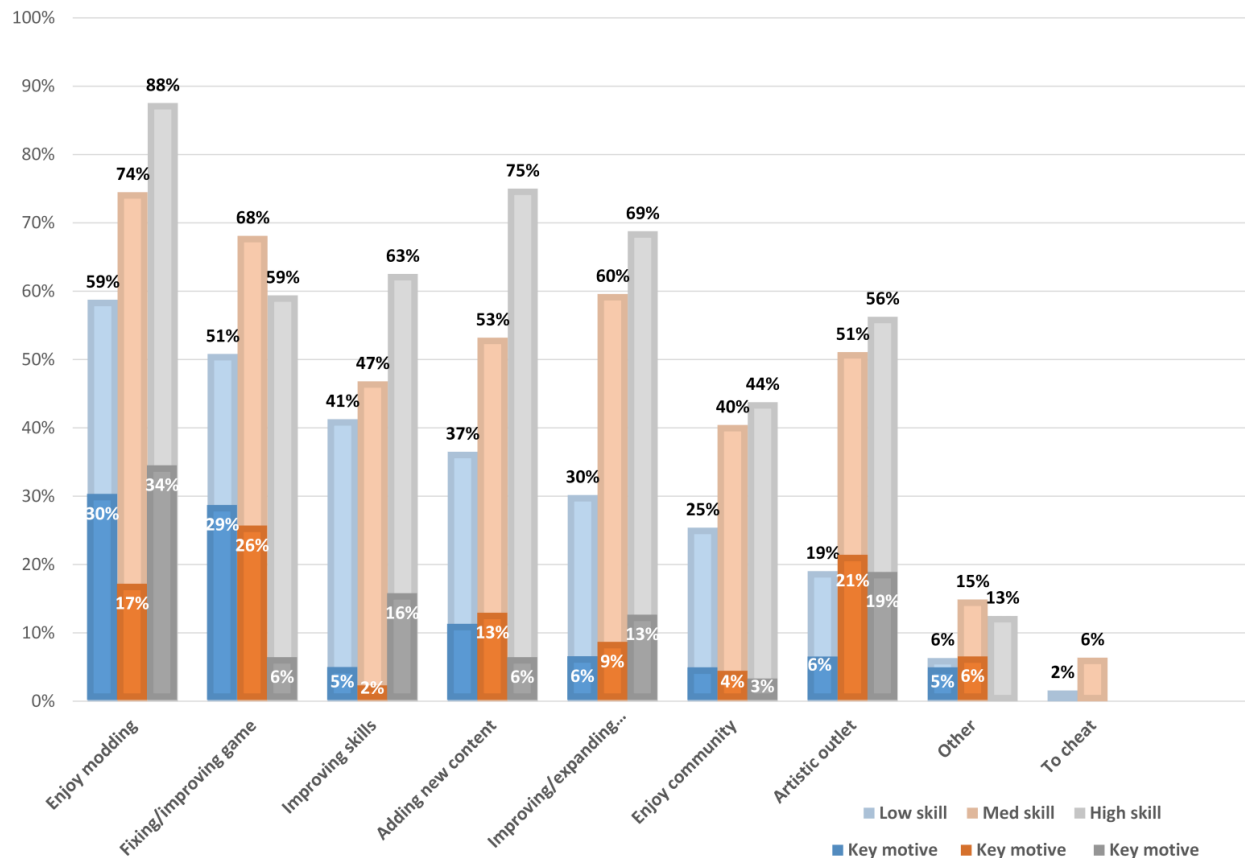


Figure 19 Respondent motivations for modding

The general pattern of motivations was similar for all three groups, and broadly consistent with Hackman & Björkqvist's (2014) small survey. Enjoyment of modding and desire to fix the game were two common motivations; enjoyment of modding was a common key motivation in both the low and high-skill group, while fixing the game was the key motivation for the middle group. The more skilled groups showed more interest in 'higher-purpose' motivations, like expanding the game world, adding new content, or artistic fulfilment.

In the second stage, modders reported sites of publication and monetisation of mods (Table 27). Most (57%) low-skill respondents had not published any mods, with publication rates rising sharply for the medium and high-skilled groups. As a survey deployment site, Nexus Mods was the dominant site of publication. Respondents could select multiple responses, but nonetheless the remaining options, including Steam Workshop, were uncommon. More advanced modders were more likely to choose the "other" option, pointing to AFK Mods, Tamriel Rebuilt, Bethesda.net, Dark Creations, and in one case, Loverslab. A prominent "other" response (n=6) was intentional non-publication, where the mod was produced for personal purposes or only for private distribution.

Factor	Category	Percentage (low skill)	Percentage (med skill)	Percentage (high skill)	Number (low skill)	Number (med skill)	Number (high skill)
Sites of publication	Nexus Mods	33	64	84	21	30	27
	Steam Workshop	6	9	13	4	4	4
	Own website	2	6	6	1	3	2
	No publication yet	57	30	6	36	14	2
	Other	10	26	38	6	12	12
Attempts to solicit donations	Yes (Nexus)	2	17	22	1	8	7
	Yes (other)	0	4	0	0	2	0
	No	95	79	78	60	37	25
	No response	3	0	0	2	0	0

Table 27 Sites of publication and monetisation attempts

At the time of the survey, monetisation was only possibly by soliciting donations. Less than a quarter of medium and high-skill modders used some form of donation, usually Nexus' integration of the PayPal system. Monetisation among low-skill modders was non-existent.

Modders were also asked whether they would use direct sales mechanisms and if this would affect their motivations (Table 28). The survey did not ask whether respondents would favour the introduction of direct mod sales, only whether they would use such a system if it was in place.

Factor	Category	Percentage (low skill)	Percentage (med skill)	Percentage (high skill)	Number (low skill)	Number (med skill)	Number (high skill)
Would respondent sell mods if permitted?	Yes	0	2	3	0	1	1
	Yes (sometimes)	14	13	22	9	6	7
	Yes (only new mods)	3	6	3	2	3	1
	No (ownership)	22	4	9	14	2	3
	No (ideology)	35	62	56	22	29	18
	No (community)	25	13	3	16	6	1
	No response	0	0	3	0	0	1
Would respondent motivation change?	Yes, profit main motivation	2	2	0	1	1	0
	Yes, profit secondary	3	11	13	2	5	4
	No, but profit a welcome bonus	30	28	31	19	13	10
	No, my mods stay free	63	60	53	40	28	17
	No response	2	0	3	1	0	1

Table 28 Modder views concerning direct sales possibilities

All skill groups objected to selling mods, and indicated their motivations would not be affected by profit. The most common objection was ideology, stating mods should be free. Low-skilled modders exhibited more varied responses; many indicated their mods could not be sold because they include content from

other modders, while others expressed concern about community reactions. These concerns did not exist for highly skilled modders.

## 6.4 How do participants perform their PAS activities?

Two RQ2 sub-questions examined the methodologies of *Skyrim*'s PAS participants, one for encyclopaedists and one for modders. The responses were drawn from lore and modding sections of the survey respectively (Table 29).

	RQ2 Component	Survey Questions
<b>How do they perform their activities in the PAS?</b>	Q2_5: How do encyclopaedists operate, and how do their practices change as they improve their abilities?	Lore_17-Lore_27
	Q2_8: How do modders operate, and how does their engagement change as they improve their abilities?	Mod_12-13, Mod_20-Mod_25

Table 29 The distribution of survey questions across RQ2 components (Q2\_5-6)

### 6.4.1 Q2\_5: How do encyclopaedists operate, and how do their practices change with level of engagement?

Encyclopaedists' operations were examined in three aspects; sources used when gathering data, frequency and levels of collaboration while gathering data and verifying articles, and finally, the acquisition of skills through PAS participation. The first question concerned data sources (Figure 20).

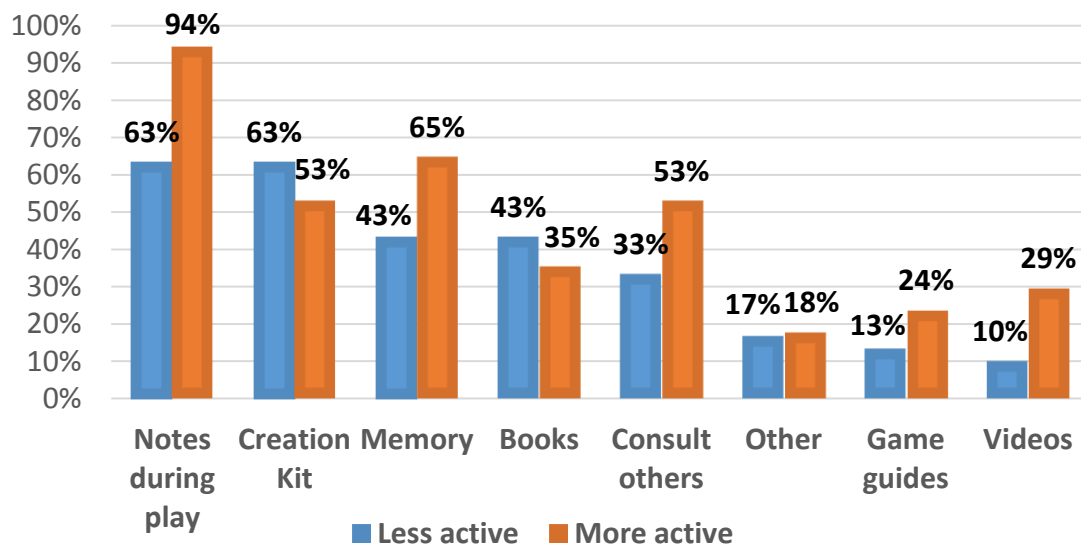


Figure 20 Sources used for data collection for UESP articles

All respondents use a wide range of sources. The less active respondents, who included most of the modder-encyclopaedist cohort, reported higher usage of the Creation Kit.



The next set of questions interrogated collaboration with other UESP participants; respondents reported on frequency of soliciting assistance and being asked for assistance (Figure 21).

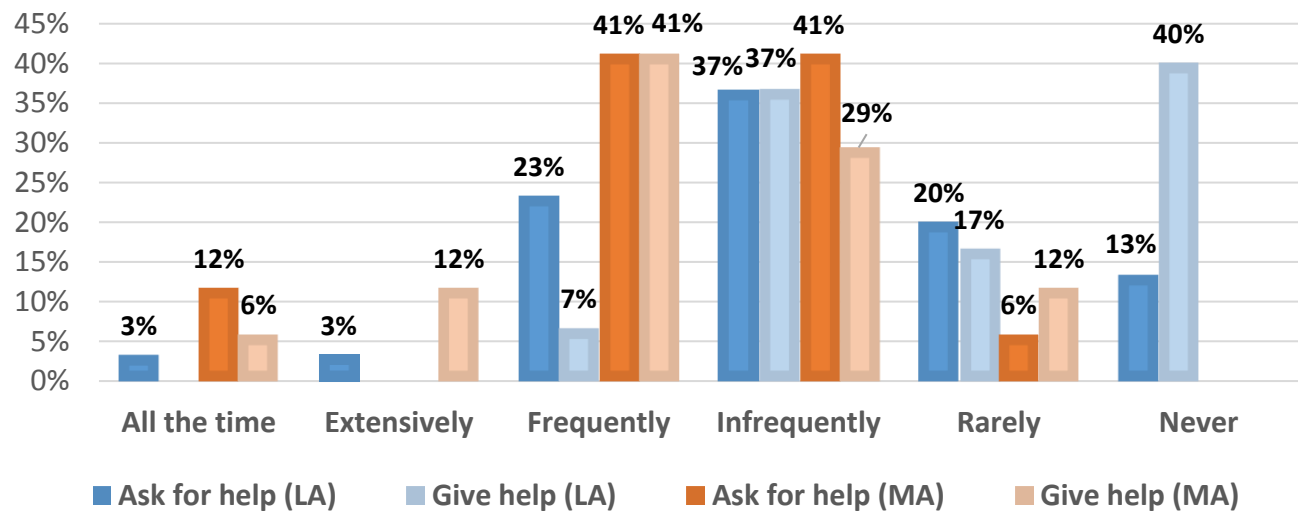


Figure 21 Soliciting and offering help among UESP users (LA = less active; MA = more active)

The less active cohort was infrequently asked to provide assistance to others. More active participants frequently assisted others. However, more active encyclopaedists were also more likely to request help. Participants then reported on the highest and typical number of collaborators for one article (Figure 22).

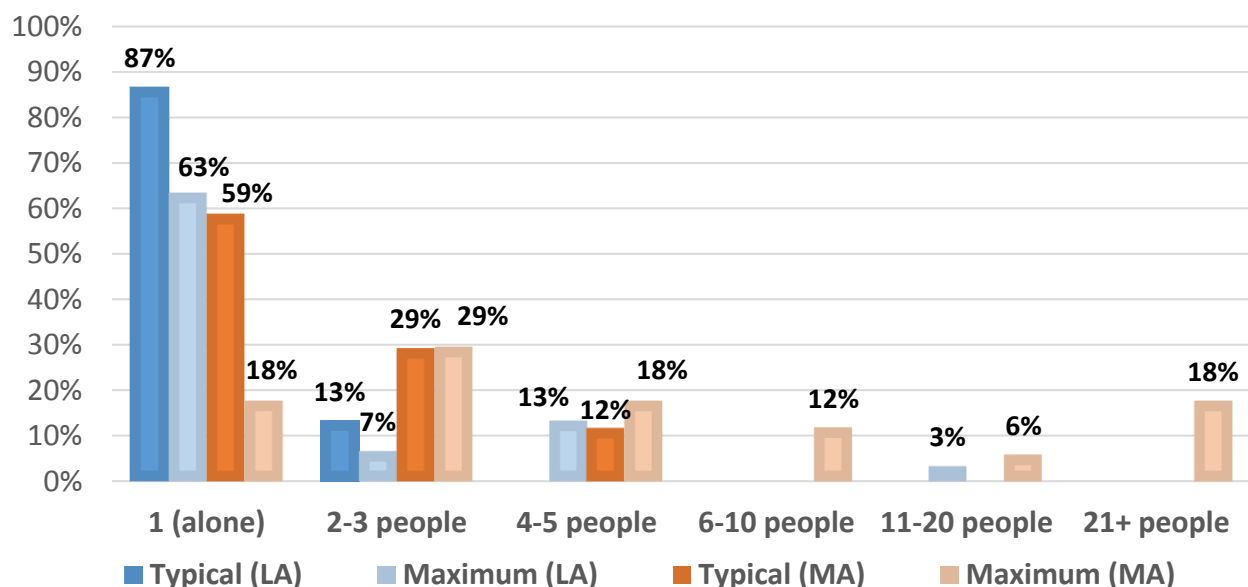


Figure 22 UESP team sizes (LA = less active; MA = more active)<sup>80</sup>

<sup>80</sup> The “1 (alone)” category numbers differ here from the data presented in the appendix to account for survey structure. Respondent who indicated only working alone were not asked about their most typical collaboration group, as the answer was implicit. The data presented has been adjusted accordingly.

For both cohorts working alone or in groups of two or three was typical. Less active users most commonly worked alone, and almost never worked in large teams. The more active cohort collaborated more frequently, sometimes in large groups.

Finally, participants reported on skill learning through UESP participation (Figure 23).

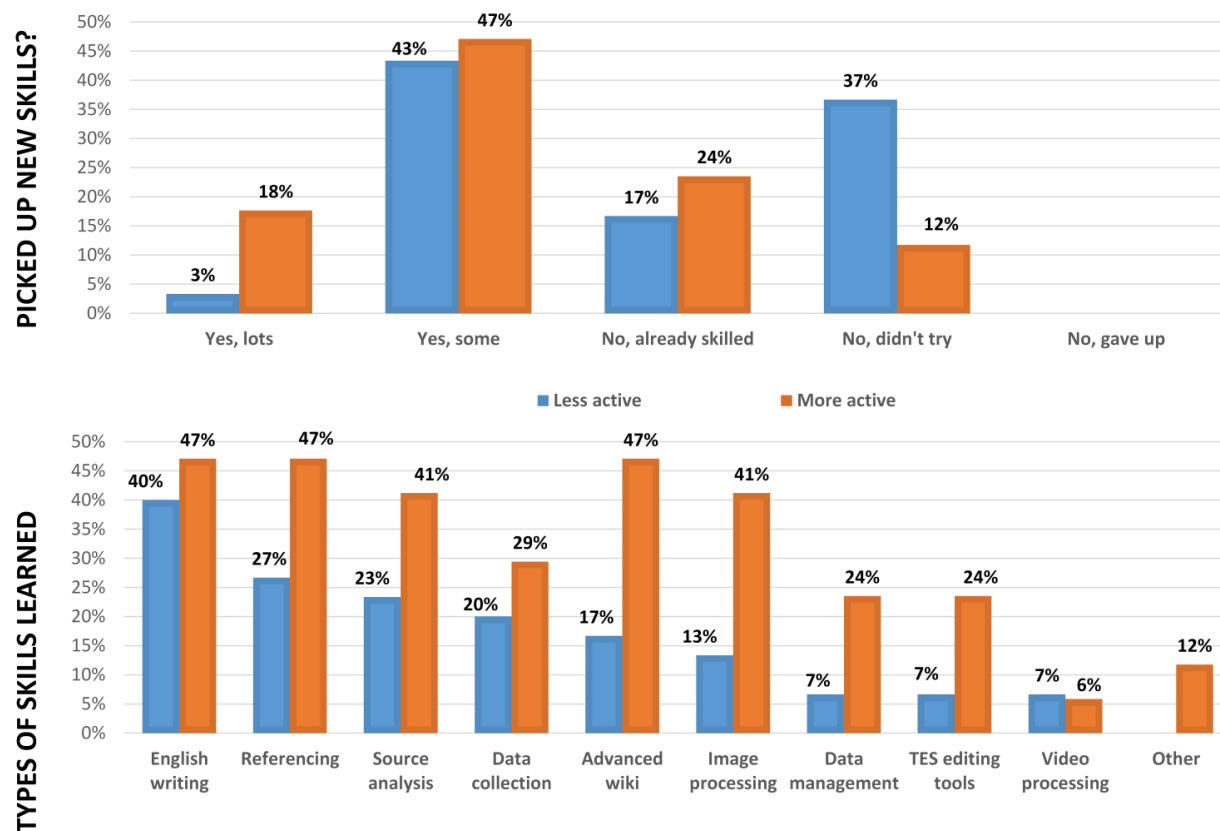


Figure 23 Skill acquisition among UESP users

46% in the less active group reported learning at least some skills, compared to 65% for more active participants, of whom 18% reporting extensive learning. Among less active participants, the most common improvement was English writing followed by referencing and source analysis. The more active group also improved English writing extensively, but referencing and advanced wikipedia skills were equally frequent, followed by data collection and the use of *TES* editing tools. The latter group also indicated a higher number of skills learned per person. Two very active group members reported learning other skills, including programming, conflict resolution, and community leadership skills. Both groups learned by trial and error, by example, and through forum discussions.

### 6.4.2 Q2\_6: How do modders operate, and how do their practices change with level of ability?

Modder operations were also examined in three aspects; the first two aspects were the vertical and horizontal dimensions of collaboration; the third aspect was the acquisition of skills through PAS participation. Vertical integration (Figure 24) was interrogated by asking modders if they had used components from other mods, altered their work for compatibility with other mods, or had their work modified by other modders. The complexity of their most recent mods was also examined.

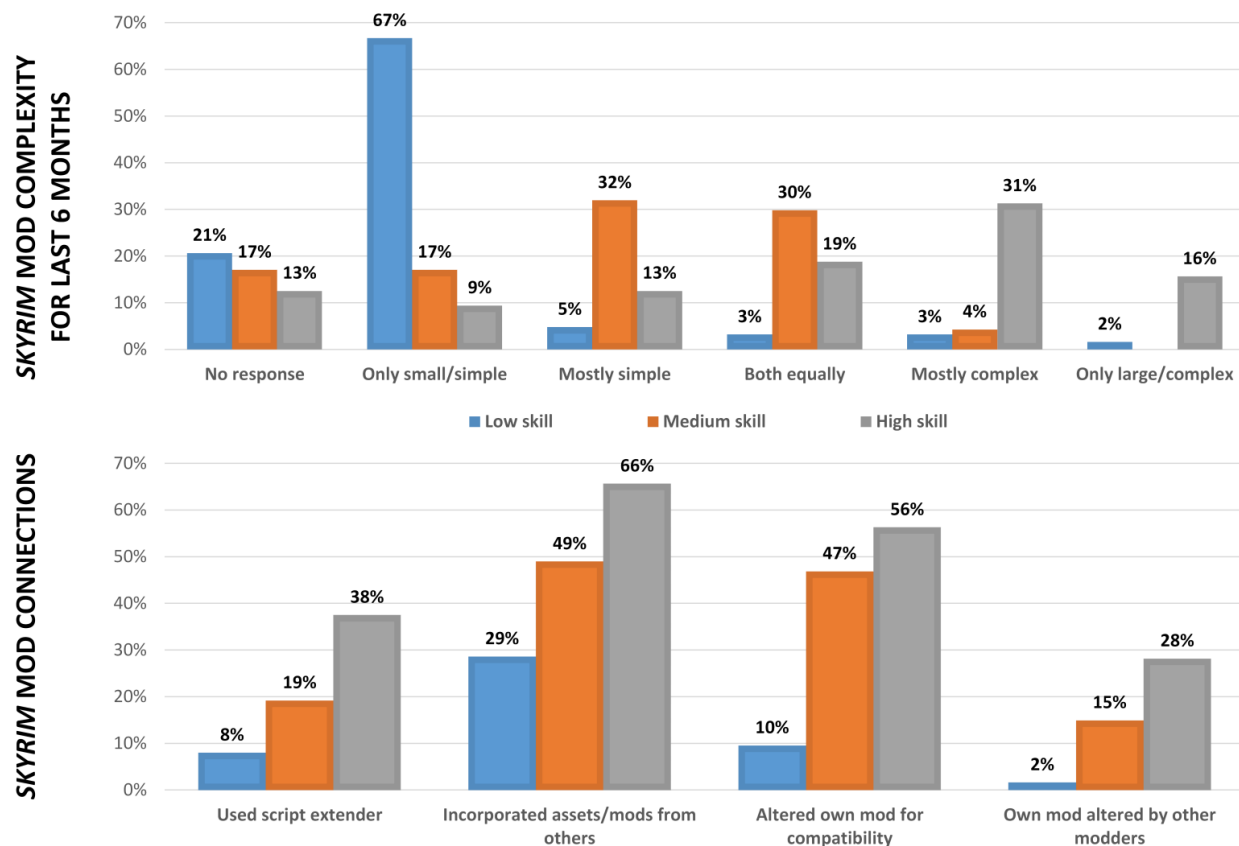


Figure 24 Skyrim mod complexity and vertical integration

Low-skill modders reported developing mostly simple mods, with progressively more complex mods for the medium and highly skilled groups. Low-skill modders commonly incorporated art assets and modified existing mods, but only rarely used the more complex script extender tools allowing the integration of external code elements into *Skyrim*; their own work was rarely reused by others. Dependency on assets produced by other modders increased for the medium and high-skill modders, as did the subsequent adaptation of their work by others.

The horizontal dimension of collaboration was investigated by reviewing maximum and typical mod team sizes (Figure 26).

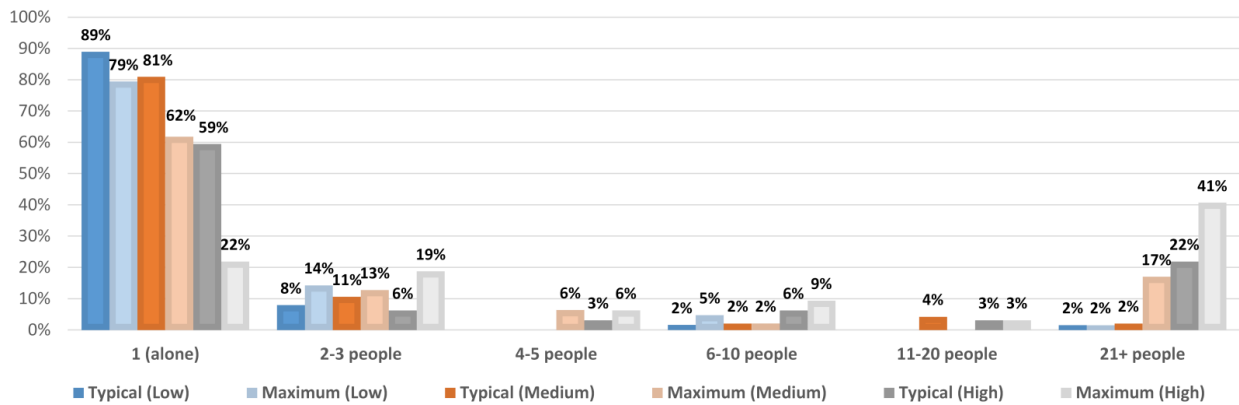


Figure 25 Maximum and typical mod team sizes<sup>81</sup>

Most modders typically worked alone regardless of skill. However, higher-skilled modders engaging more often in larger groups, particularly teams of 21 or more people. ‘Middle ground’ team sizes were uncommon for all skill groups. Subsequently, modders reported on learning new skills other than the Creation Kit, which was taken as a given (Figure 26).

Only half of the low-skilled respondents reported any learning, and in most cases only limited learning. Most medium-skilled respondents learned, many substantially; finally, all high-skilled modders experienced learning, in most cases substantial. The methods of learning were similar for all groups: trial and error, example, talking with others, and through online resources like video/text tutorials, books. One respondent reported participating in a community-organised class at the TES Alliance site.

All learners pointed to a similar range of game development skills: scripting, 2D and 3D graphics, game and level design, writing, and in fewer cases, sound or music. Medium and high-skilled modders more commonly reported learning softer skills required for effective team collaboration. Some respondents in the low and high-skill groups reported other technical skills, including texturing, animation, and shader programming; one highly skilled respondent had also learned *"Unexpected misc. knowledge such as Forestry, Biology, and real world [sic] history through researching the real-world inspirations and counterparts to certain elements of The Elder Scroll lore."* (Survey, Mod\_25).

<sup>81</sup> The “1 (alone)” category numbers differ here from the data presented in the appendix to account for survey structure. Respondent who indicated only working alone were not asked about their most typical collaboration group, as the answer was implicit. The data presented has been adjusted accordingly.

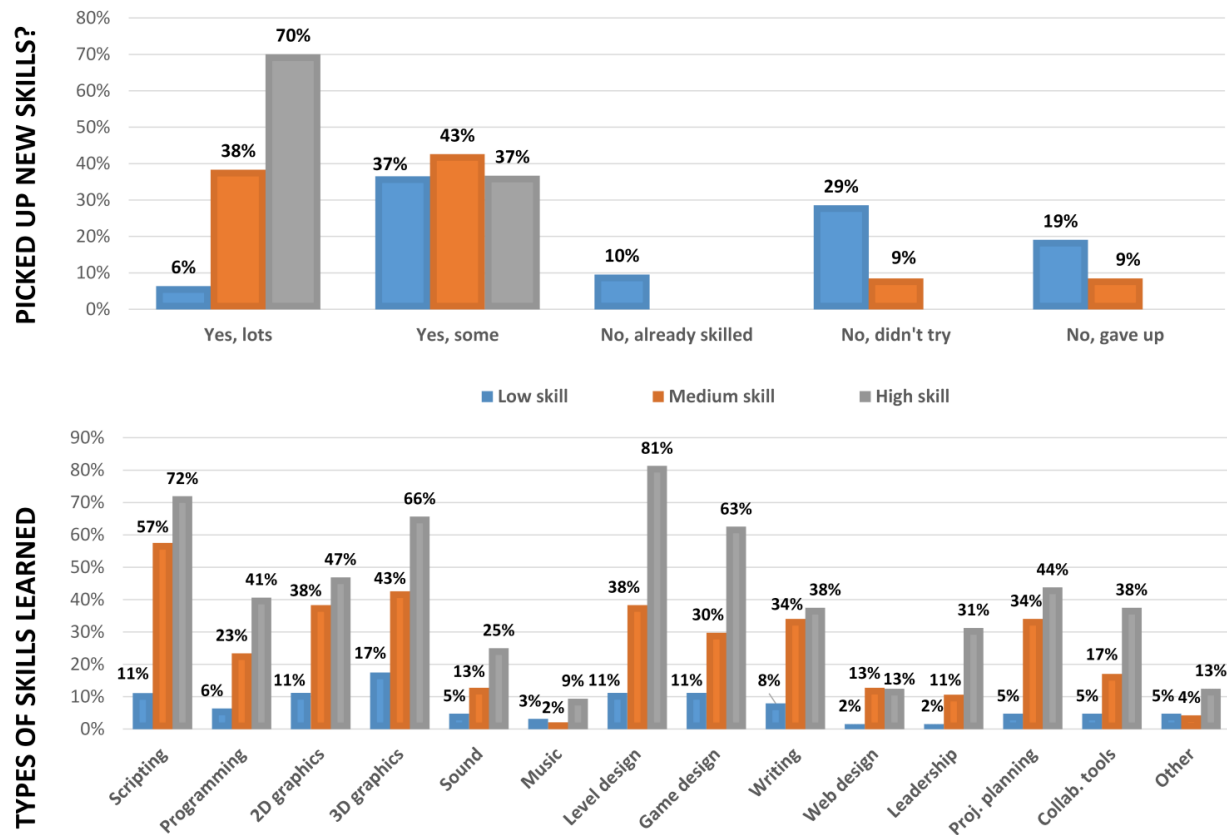


Figure 26 Learning among modders

## 6.5 Is engagement about game cultural content or game itself?

The final three sub-questions of RQ2 asked whether *Skyrim*'s PAS participants were more focussed on cultural content within the game, or on the game itself (Table 30).

	RQ 2 Component	Survey Questions
To what degree is their engagement related to the game's cultural content rather than the game itself?	Q2_7: Is there a relationship between long-lasting encyclopaedist PAS involvement and higher levels of engagement with the game's cultural content?	Lore_02, Lore_04-Lore_14, Lore_25-Lore_27,
	Q2_8: Is there a relationship between long-lasting modding PAS involvement and higher levels of engagement with the game's cultural content?	Mod_01-Mod_11 Mod_25-Mod_31

Table 30 The distribution of survey questions across RQ2 components (Q2\_7-8)

### 6.5.1 Q2\_7: Is there a relationship between long-lasting encyclopaedist PAS involvement and higher levels of engagement with the game's cultural content?

The examination of relationship between long-lasting involvement and engagement with cultural content was reviewed in three sections; timespan of engagement, breadth of engagement, and finally, personal specialisation. The first question compared levels of activity with overall time of engagement (Figure 27).

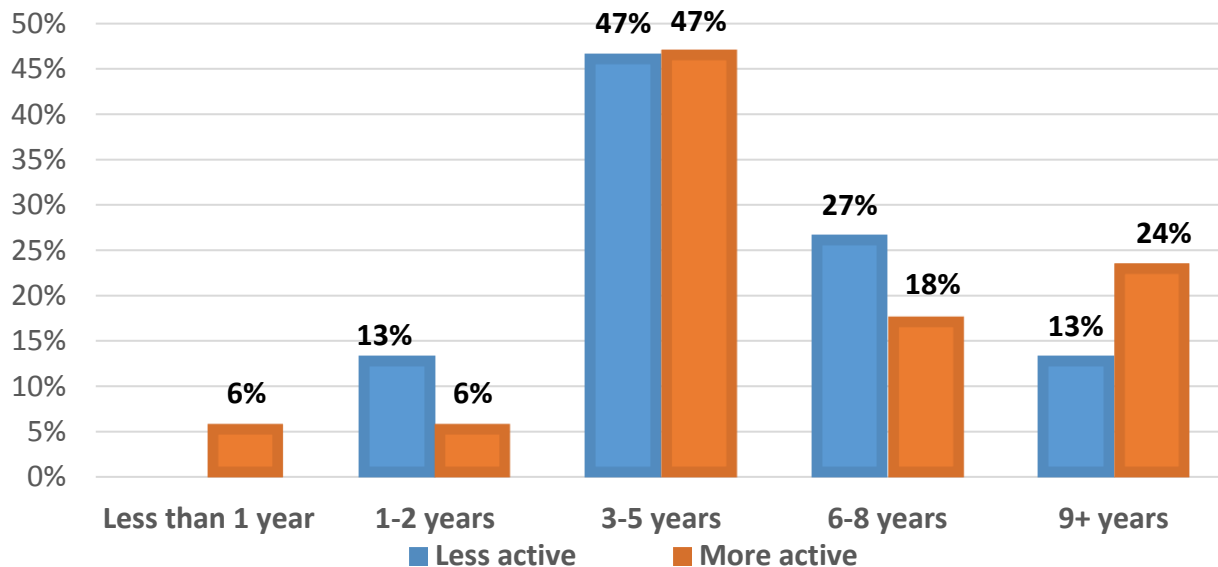


Figure 27 Engagement span for active UESP users

For both groups, the three to five years cohort who had joined the UESP between 2011 (*Skyrim*) and 2014 (*TES Online*) dominated. The more active group showed a larger percentage of participants whose involvement dated back nine or more years.

The second section examined breadth of engagement by reviewing the activities undertaken by UESP participants. First, article modification and creation rates were compared (Figure 28).

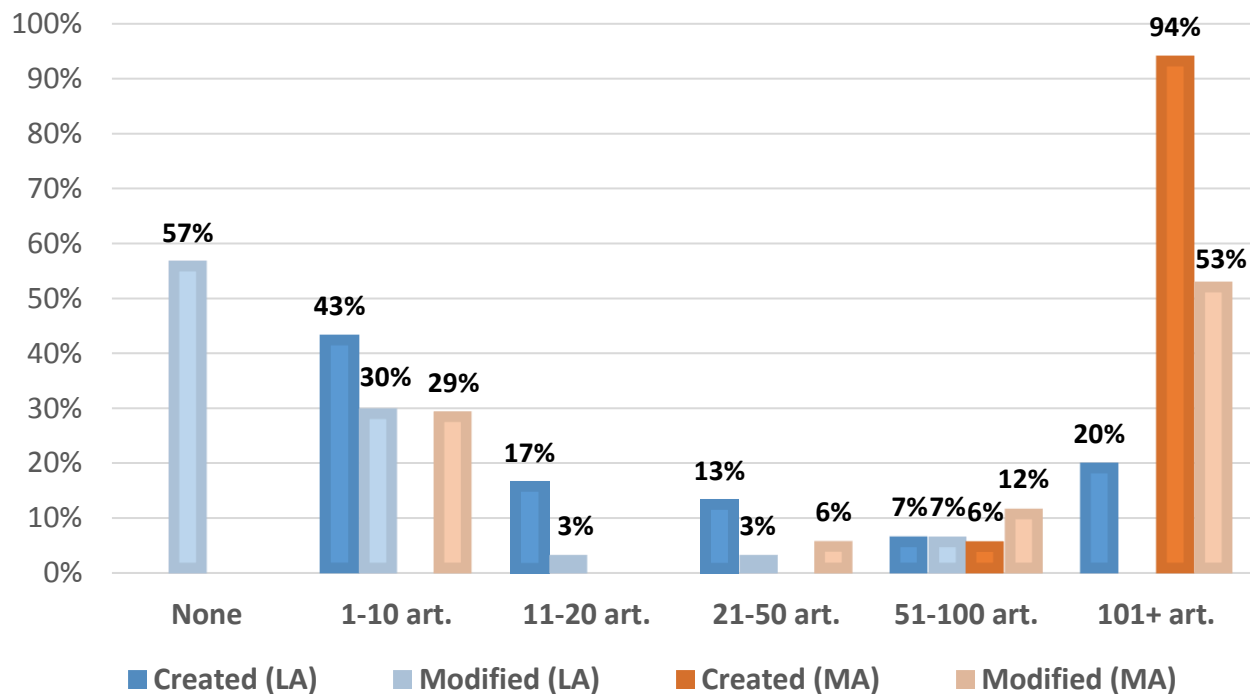


Figure 28 UESP engagement in article creation/modification (LA = less active; MA = more active)

Many of the less active cohort had never created any new pages, and most had edited less than 20 pages. All the more active users had created new pages, in most cases more than 100. More than half the more active participants had also edited more than 100 pages. Weekly working times for both groups were also examined (Figure 29).

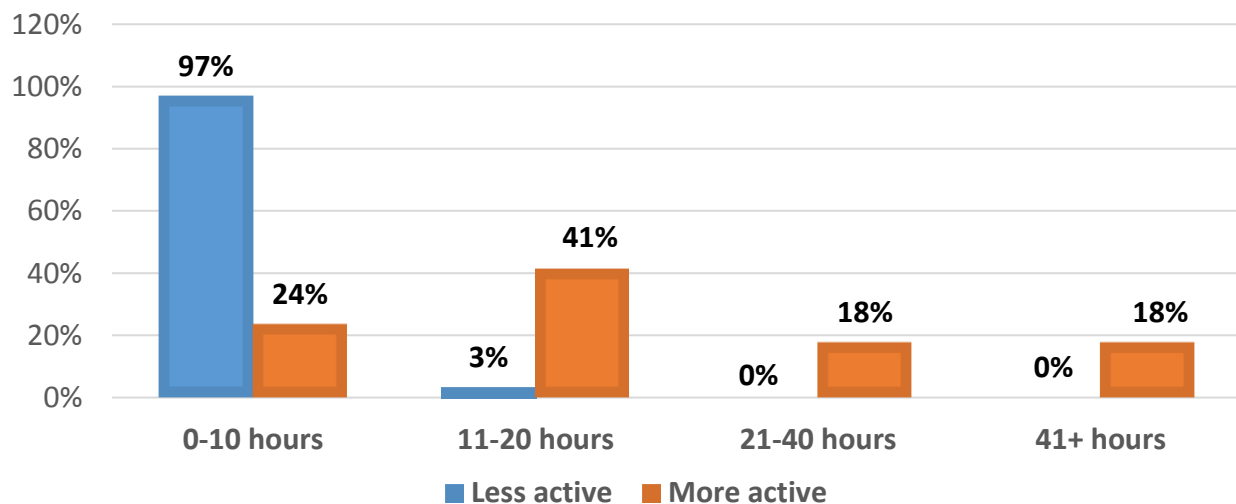


Figure 29 UESP time allotment for active users

In the less active group, 97% spent less than ten hours per week, and no one spent more than 20 hours. More than 75% of the more active group devoted at least 11 hours weekly to editing UESP articles, and 18% devoted more than 40 hours.

The UESP covers the entire *TES* series, with pages devoted to every *TES* product, as well as non-product-specific lore pages bringing together lore from different products, and non-product-specific general pages providing background information on the series' development. Information can also be broken down into thematic sections such as gameplay, plot summaries, quests, and so on. Table 31 summarises respondent contributions for the two groups by product and by type or subject, also noting areas of highest contribution.

Factor	Category	Contribution (less active)	Contribution (more active)	Highest contr. (less active)	Highest contr. (more active)
Content contribution / highest contribution (by product)	<i>Skyrim</i>	63%	88%	37%	24%
	Lore	53%	82%	33%	12%
	<i>Oblivion</i>	50%	82%	3%	6%
	<i>TES Online</i>	50%	94%	13%	41%
	<i>Morrowind</i>	47%	65%	10%	0%
	<i>Daggerfall</i>	20%	53%	0%	12%
	<i>Arena</i>	13%	59%	0%	0%
	<i>Redguard</i>	13%	59%	3%	0%
	General	13%	53%	0%	6%
	Books	10%	59%	0%	0%
	<i>TES Legends</i>	10%	65%	0%	0%
	<i>Battlespire</i>	7%	59%	0%	0%
	<i>TES Travels</i>	0%	47%	0%	0%
	Other	0%	18%	0%	0%
Content contribution / highest contribution (by type)	Characters	57%	82%	7%	35%
	Quests	47%	94%	10%	35%
	Locations	47%	88%	17%	12%
	History	40%	71%	17%	0%
	Gameplay	37%	82%	10%	0%
	Creatures	37%	82%	3%	0%
	Books in-game	33%	76%	3%	0%
	Factions	30%	76%	7%	0%
	Other lore	30%	65%	13%	0%
	Plot summaries	20%	76%	0%	0%
	Other	20%	24%	13%	12%

Table 31 UESP content creation and highest contribution by product and type/subject

Both groups concentrated their efforts on *Skyrim*, general lore, *Oblivion*, *TES Online*, and *Morrowind*.

The more active respondents reported more numerous overall contributions across the whole spectrum



of products and content types. Areas of highest contributions indicated less active users more often concentrated on non-game-specific lore than the more active group, and, while limited to fewer products, concentrated on a broader range of content types. Both groups also reported “other” contributions; text responses concentrated on templates, images, text proofing, and bugs/Easter eggs. Respondents were next asked analogous questions about their rate of contributions to *Skyrim*-specific articles on the UESP (Figure 30).

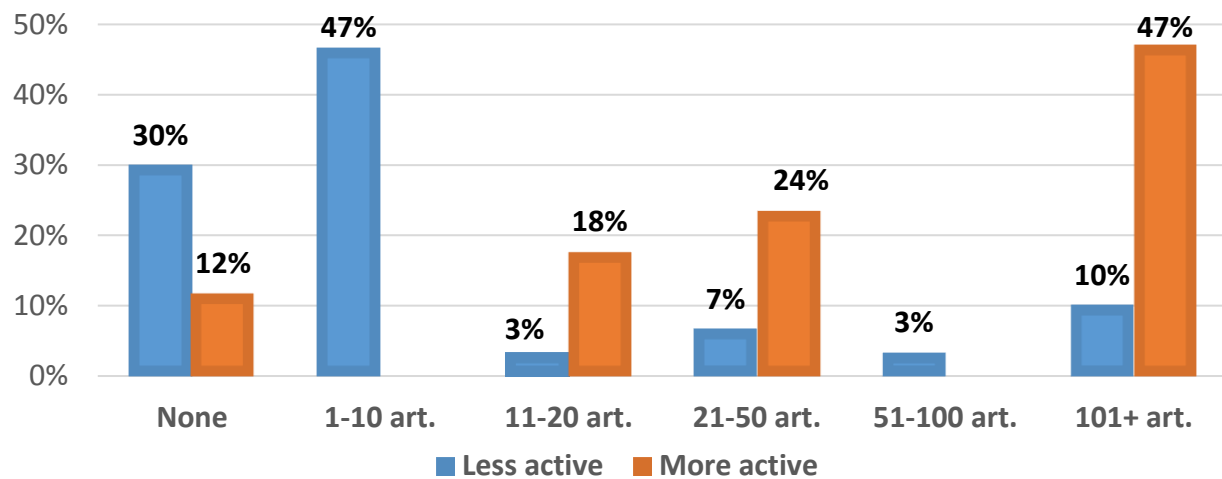


Figure 30 *Skyrim* articles modified or created by active users

The on-going rate of contributions for *Skyrim* in terms of weekly time spent was uniformly low. Almost all participants reported less than ten hours per week on *Skyrim* content. The broader pattern of contributions for *Skyrim* was similar to the participants' total UESP contributions across all games (Table 32).

Factor	Category	Contribution (less active)	Contribution (more active)	Highest contr. (less active)	Highest contr. (more active)
<b><i>Skyrim</i> content contribution / highest contribution (by type)</b>	Quests	33%	76%	7%	12%
	Locations	33%	71%	17%	18%
	Characters	30%	65%	10%	29%
	Gameplay	20%	47%	3%	0%
	Creatures	17%	71%	3%	6%
	Factions	17%	59%	3%	0%
	History	13%	47%	7%	0%
	Other lore	10%	41%	7%	0%
	Plot summaries	7%	47%	0%	0%
	Books in-game	7%	47%	0%	0%
	Other	3%	24%	3%	18%

Table 32 *Skyrim* UESP content creation and highest contribution by type/subject

The third section examined respondents' chosen specialisation(s) in UESP topics (Figure 31), and how this specialisation was connected to outside interests. Questions about specialisation were similar to the earlier questions about areas of contribution, but the earlier questions did not necessarily imply a special preference for the given game/topic, as the work may simply have been necessary.

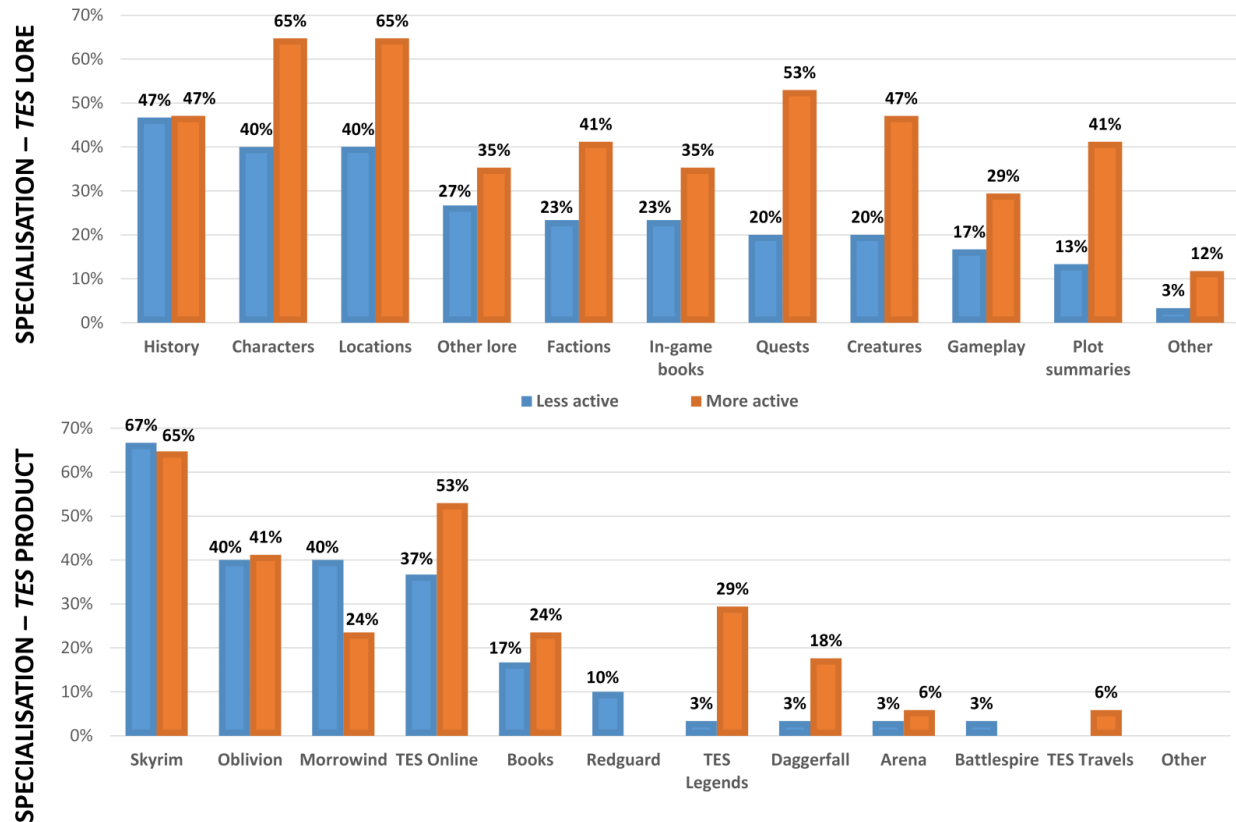


Figure 31 Thematic specialisation among UESP participants

All topics were of interest to at least some respondents, but the more active respondents tended to specialise in more areas. When asked about specialisation by product, the more active group pointed to a narrow range of the most recent products. The less active group, although also primarily concentrating on the same range, showed more interest in older products, especially *Morrowind*.

The final question asked whether the respondents' specialisation was related to their interests outside of *TES*, and to comment on that connection. Thirty-eight percent of the less active group reported a connection between external interests and *TES* engagement, compared to 13% for the more active group. The textual explanations of the connection were similar for both groups, and concentrated on interest in history and the Norse culture, with geography, fantasy, mythology and literature also being prominent.

### 6.5.2 Q2\_8: Is there a relationship between long-lasting modding PAS involvement and higher levels of engagement with the game's cultural content?

The relationship between long-lasting involvement and engagement with cultural content for modders was explored in four sections; timespan of engagement, breadth of engagement, *TES* lore integration, and finally, the integration of non-*TES* subject matter into mods. The first questions examined the moment of modding initiation. Some categories were collapsed for clarity (Table 33).

Factor	Category	Percentage (low skill)	Percentage (med skill)	Percentage (high skill)	Number (low skill)	Number (med skill)	Number (high skill)
First game modded?	Skyrim	62	49	41	39	23	13
	Oblivion	22	19	16	14	9	5
	Morrowind	13	30	44	8	14	14
	Redguard	2	0	0	1	0	0
	TES Online	2	0	0	1	0	0
	Arena	0	0	0	0	0	0
	Daggerfall	0	2	0	0	1	0
	Battlespire	0	0	0	0	0	0
First mod produced?	Patches & revisions	24	28	22	15	13	7
	New locations	22	23	38	14	11	12
	NPC-related	19	13	6	12	6	2
	Equipment & small items	19	11	16	12	5	5
	Other	8	9	3	5	4	1
	Books & culture	3	0	0	2	0	0
	Quests	3	2	3	2	1	1
	Cheats	2	6	0	1	3	0
	Landscape & architecture	0	9	13	0	4	4

Table 33 Moment of modding initiation for active *TES* modders

Most modders regardless of skill level started out with *Skyrim*, *Oblivion*, or *Morrowind*. The percentage of *Morrowind*-initiated modders grew progressively higher from low to high skill, and in the latter category dominated over *Skyrim*. *Oblivion* as a moment of initiation was low for the two more skilled groups<sup>82</sup>. All groups had a high percentage of patches and revisions as first mods produced, but this percentage was lower for high-skilled modders who were more likely to have started with *Morrowind*. For the low-skilled modders, who mostly started with *Skyrim*, two of the most important categories were NPCs, mostly consisting of simple companion mods where an NPC is created to follow the player, and new locations, mostly consisting of player housing. The new locations category did not presume

<sup>82</sup> While this is beyond scope, the author suspects most *TES* fans consider *Oblivion* to be less interesting, and therefore less inspiring, than either *Morrowind* or *Skyrim*. Ken Rolston who led the design of both games considers *Morrowind*'s world "far superior in its sense of place, richness of theme and culture" (Rolston, 2009, p. 120). *Morrowind*, *Oblivion* and *Skyrim* director Todd Howard seems to agree (Senior, 2011).

architectural additions, as most new locations mods reuse existing architecture. New player housing also dominated for the medium skilled modders who were also initiated on *Skyrim*.

Modders next reported their overall span of their modding engagement and the total number of mods they had developed (Figure 32).

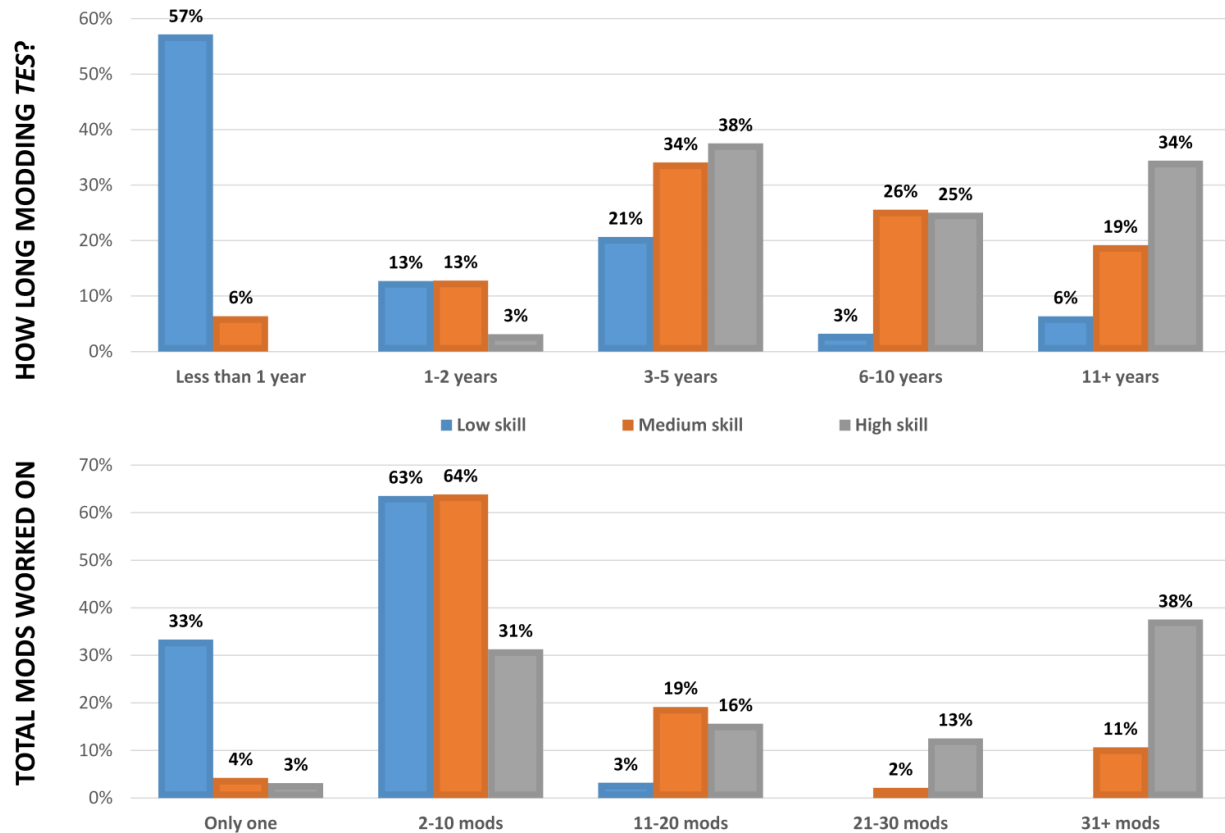


Figure 32 Length and depth of TES modding engagement

97% of highly skilled modders had more than three years of experience, compared to 30% for low-skilled modders. More than half of the high-skilled modders had six or more years of experience, and 34% have been modding for more than a decade. Most low-skilled modders have produced less than five mods, many only one mod. A third of the high-skilled modders had produced more than 30 mods. For both questions, the medium-skilled modders presented a middle ground.

The next section analysed breadth of engagement, and was restricted to questions about *Skyrim* mods produced rather than *TES* mods in general. Respondents who did not mod *Skyrim*, which included 19% of low-skilled, 17% of medium-skilled, and nine percent of high-skilled participants, did not answer subsequent questions in this section. Subsequently, *Skyrim* modders were asked about their weekly time investment into *Skyrim* modding, and the total number of *Skyrim* mods produced (Figure 33).

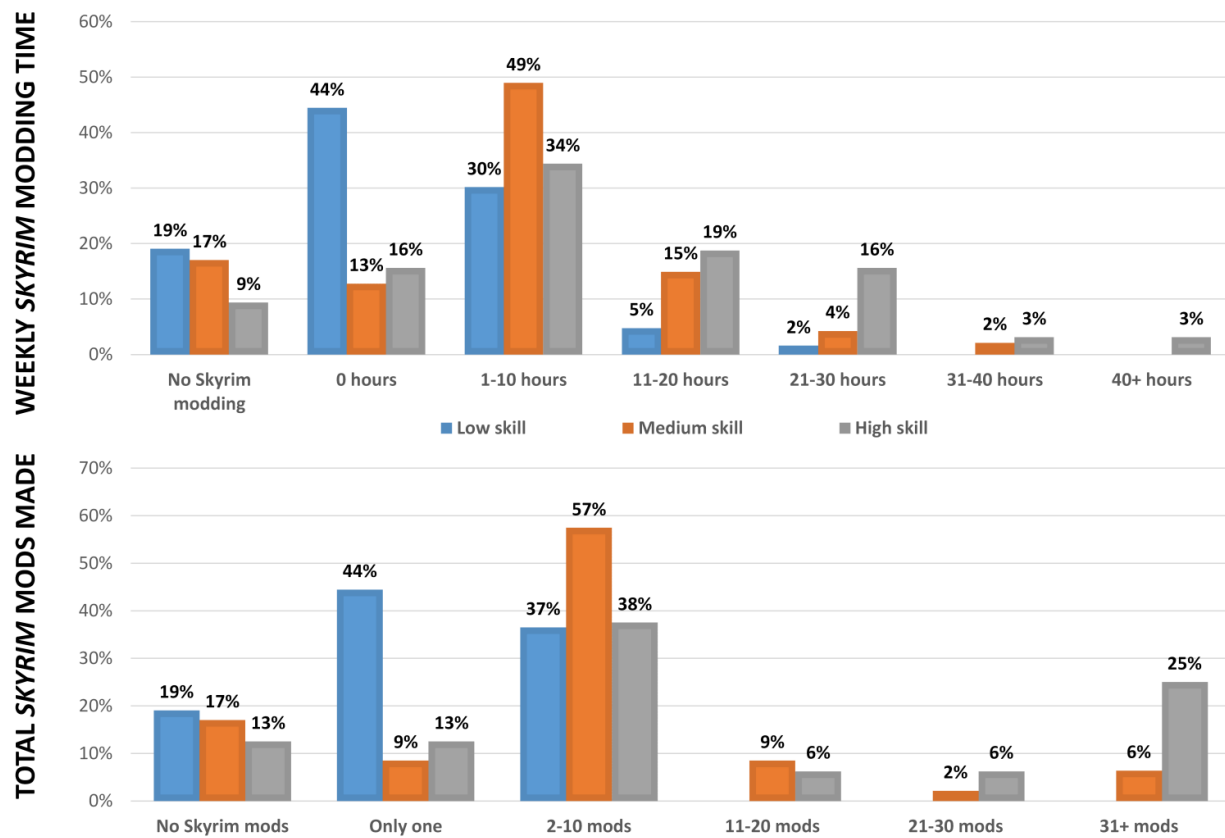


Figure 33 Time investment and depth of Skyrim modding engagement

55% of low-skilled modders spent no time at all modding *Skyrim* in a typical week. Weekly modding time then increased progressively for the medium and high-skilled groups. The pattern for the total number of *Skyrim* mods produced closely matched the analogous pattern for total *TES* mods produced. *Skyrim* modders were next asked about the mods they have produced for *Skyrim*, and the one type of mod most often produced (Table 34).

Factor	Category	Production (low skill)*	Production (med skill)*	Production (high skill)*	Highest production (low skill)	Highest production (med skill)	Highest production (high skill)
<b>Skyrim mods produced / most often produced</b>	Patches & revisions	28	35	35	15	13	7
	NPC-related	19	34	25	12	6	2
	New locations	17	22	30	1	3	0
	Equipment & small items	14	23	29	12	5	5
	Landscape & architecture	5	7	15	5	4	1
	Quests	4	7	10	2	1	1
	Books & culture	2	1	4	2	0	0
	Other	2	8	4	0	4	4
	Cheats	1	7	7	14	11	12

Table 34 Types of Skyrim mods produced by modders and type most often produced per modder

\*Numbers can exceed 100% of respondents as multiple categories were collapsed for clarity

All groups displayed interest in several core areas; patches and revisions, NPCs, equipment and small items, landscape and architecture, and new locations. More marked differences were observable when examining the most often produced mods. Low-skilled modders concentrate on small patches, simple companion mods, player houses, and weaponry; highly skilled modders concentrated on more sophisticated projects, with the most important area being the complete locations with NPCs and quests. Medium-skilled modders fell between the other two groups. These two questions also produced several “other” responses, including immersion and weather enhancements, textures, script alterations, DLC-sized new locations projects, and finally resources for other modders.

The third section investigated modder research and inspirations. Modders were asked about researching *TES* lore and the pursuit of lore-friendliness (Figure 34).

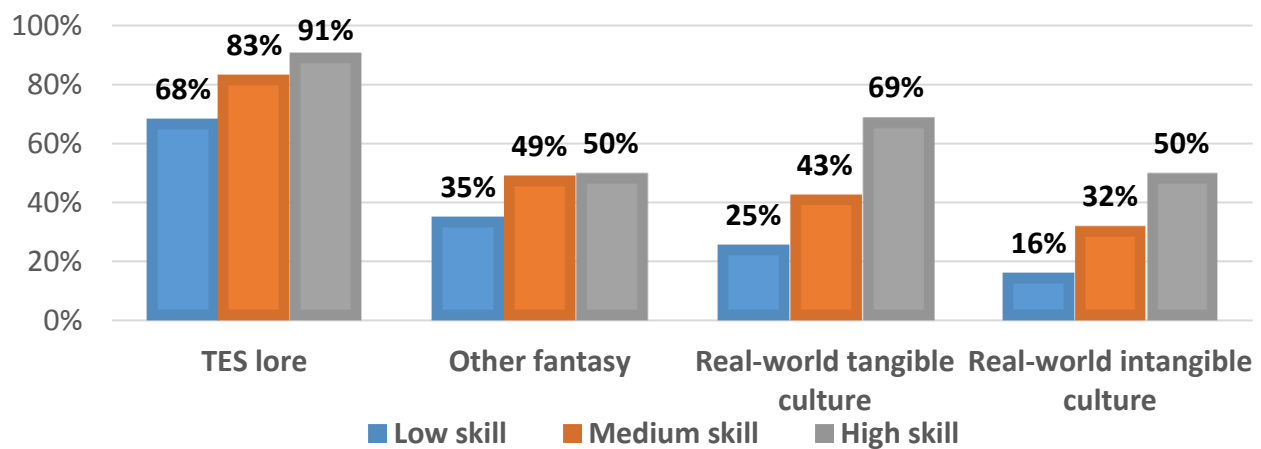


Figure 34 Modder research for mod content / inspiration

Most users in all three groups reported researching *TES* lore for their mods, the percentage rising with skill and reaching 91% of respondents in the high-skill cohort. All groups showed lower interests in other fantasy and real-world cultures as research topics for inspiration. There was observably more research for the higher-skilled groups.

The remaining questions in this set explored *TES* lore research and usage in more detail (Figure 35).

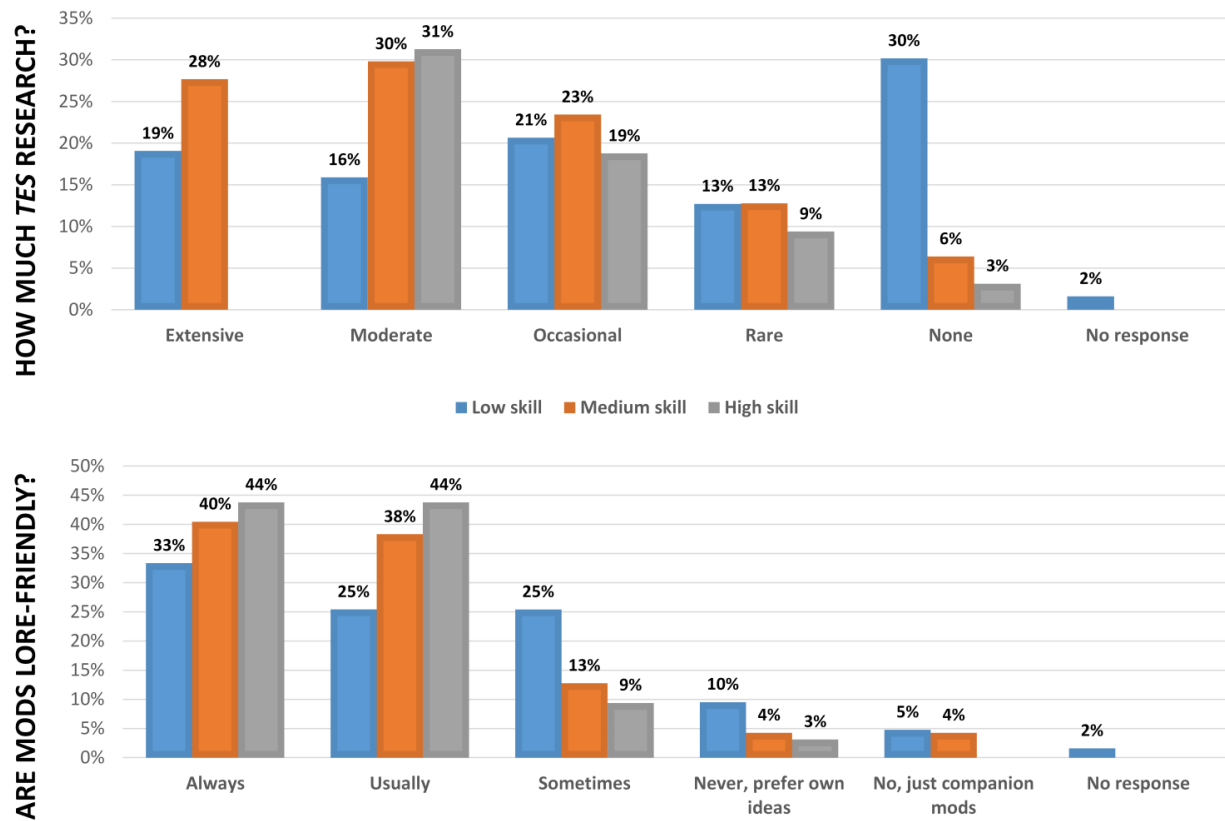


Figure 35 TES lore engagement in modding

Most modders in all three groups reported at least sometimes trying to make their mods lore-friendly, i.e. fit in well with established lore without unnecessary invention. Modders who only produce companion mods had the option of choosing a separate negative response, as lore-friendliness does not really apply to such mods; this option was rarely chosen, and only in the low and medium-skill groups. The more highly skilled the modder, the more likely they were to usually or always aim for lore-friendliness. Analogously, highly skilled modders conducted extensive research into *TES* lore, with research rates dropping for medium-skill modders. The low-skill modders conducted sharply less research than the medium-skill group, with many reporting no *TES* research for their mods.

The final section for this sub-question interrogated whether modders integrated their non-*TES* interests into their mods by creating mods or mod elements based on fantasy, science-fiction, or real-world cultures. The short-answer responses for the fantasy and science-fiction questions indicate the question was unclear. At least some modders misinterpreted the question as being about modding other games. Regardless, the use of elements from other fantasy or science-fiction elements was around ten percent for all respondents. Use of real-world cultural elements was even lower, but more varied: three percent

for low-skill, six percent medium-skill, and 16% for high-skill modders. Modders were then asked which elements they had imported from fantasy/science-fiction and real-world cultures (Table 35).

Factor	Category*	Percentage (low skill)	Percentage (med skill)	Percentage (high skill)	Number (low skill)	Number (med skill)	Number (high skill)
Mods based on fantasy / science- fiction?	Creatures & characters	6	17	3	4	8	1
	Equipment & clothes	8	13	13	5	6	4
	Books & texts	3	4	3	2	2	1
	Architecture & landscape	0	0	9	0	0	3
	Other tangible	0	0	0	0	0	0
	Music & dances	2	0	0	1	0	0
	Other intangible	2	6	9	1	3	3
	Other	0	0	0	0	0	0
Mods based on real culture?	Creatures & characters	0	0	0	0	0	0
	Equipment & clothes	3	4	16	2	2	5
	Books & texts	0	0	6	0	0	2
	Architecture & landscape	0	2	6	0	1	2
	Other tangible	2	0	3	1	0	1
	Music & dances	0	0	0	0	0	0
	Other intangible	0	4	28	0	2	9
	Other	0	0	0	0	0	0

Table 35 Modding usage of fantasy / science-fiction or real cultural elements

\*Numbers can exceed 100% of respondents as multiple categories were collapsed for clarity

When cultural elements were incorporated, they were primarily tangible items; modders who reported adding “A Clan Armstrong Tartan” (Survey, Mod\_30), Sudanese swords and medieval European items. Some modders also reported using real-world elements in a transformed, lore-friendly manner: “[...] I have never directly and deliberately added “real” elements; but often deal with very close parallels that already exist inside TES lore.” (Survey, Mod\_30).

## 6.6 Conclusion

TES PAS participants exhibit a strong degree of fandom. Like in other PAS communities (Gee, 2013), deeper engagement drives research and learning. As community members acquire new skills, they engage in vertical and horizontal collaboration between individuals and groups, and generally expand the scope of engagement in breadth and depth, for example by going back to find older games and by trying new activities within the community. The subsequent sections summarise the responses for each of the eight sub-questions of RQ2.



### 6.6.1 Q2\_1: What are the basic characteristics of PAS participants, particularly compared to overall player demographics?

The participants of *Skyrim*'s online PAS who responded to the survey exhibit a lower average age in the mid-20s, and a much higher, 75-25 male-to-female ratio than the broad gaming community (e.g. Entertainment Software Association, 2017). However, the results closely match the results of Johnson's (2013) survey of general *Skyrim* players. While these findings are non-generalisable, they do suggest the PAS participants are likely to represent a similar profile as the entire *Skyrim* community. However, PAS participants in the present study were overwhelmingly from English-speaking countries; this is to be expected, because all deployment sites were English-speaking.

The respondents showed high activity levels and an attachment to *TES* as a world. Two thirds of respondents had been engaged with the series for longer than five years, i.e. prior to the release of *Skyrim*. Participants explore their object of affinity through multiple avenues, deepening their knowledge of the imaginary world by reaching back to earlier products they had not yet experienced, as well as reading more about the world's history. Consistent with the observations of journalists (Macgregor, 2017) and its lead designer (Rolston, 2009), *Morrowind* holds a special place among past products, with more *Skyrim* players going back to *Morrowind* than to the more recent *Oblivion*. Respondents customise their experiences through mods, especially favouring those improving the game in their perception, without necessarily adding new content.

### 6.6.2 Q2\_2: Are there any observable differences between passive consumers, encyclopaedists (lore-based), and modders (modding-oriented)?

It was impossible to draw any conclusions on differences between the modders and encyclopaedists due to the small numbers of respondents on the encyclopaedist side. Only a broader distinction could be made between the active community members, modders or encyclopaedists, and the passive consumers. Consistently with the trajectories of participation described by Squire (2011), the passive component turned out to be visibly younger, both in age and experience with the *TES* series; they are the new entrants, who may in time become more engaged with the series and its world.

### 6.6.3 Q2\_3: Are encyclopaedists for single-player games like *Skyrim* more interested in the world's lore as opposed to gameplay than is indicated in studies of MMO games like *World of Warcraft*?

Almost all active UESP participants consider the *TES* world, rather than any game or product, central to the passionate affinity space. Respondents were intensely fascinated by the *TES* imaginary world, keen to document and debate it in the lore communities. Participant motivation proved largely consistent with the observations from Chapter 3, indicating Wirman's (2007) and Calleja's (2011) assertions about

the prevalence of power gamers over fans in online game communities need not apply to single-player games. *TES* players clearly do not see gaining advantage in the game as a primary, or even a secondary objective. They are not power-gamers, but fans like the traditional fan communities around *Star Trek* (Jenkins, 1992) or *Star Wars* (Brooker, 2002).

One reason for the discrepancy between Wirman (2007) and Calleja (2011) and the present study probably lies in the fact those earlier studies concentrated on *World of Warcraft* players. A multiplayer experience such as *World of Warcraft* is primarily social, with the competitive and social aspects dominating over exploration and discovery of the world (Bartle, 2004). In such an environment, players might only explore lore to gain an advantage. However, in a single-player experience like *Skyrim*, there is no competitive advantage intrinsic to the game from learning lore. *Skyrim* players as a group will naturally be more interested in exploration, if only because players more interested in the competitive or social experience will gravitate towards other games.

Earlier studies of fan cultures argue in a fan community context, deeper knowledge of the object of fandom may constitute cultural capital allowing fans to rise in the hierarchy of the community (Hills, 2002). For UESP participants, greater engagement and experience translated into a more community-oriented focus, an attachment to the community and a desire to pass on knowledge. Advanced lore participants know *TES* intimately, and savour the possibility of sharing with others. In the trajectory of player engagement in PAS outlined by Squire (2011), they have veered off towards community leadership roles with their greater emphasis on the social context.

The deep fan engagement with lore in *TES* is also likely connected to the world-building efforts in the series, and the way in which the world has been built. The survey did not ask players to identify aspects of *TES* world-building they found compelling. However, it may be assumed the subjective nature of *TES* lore, its openness to interpretation and speculation, and its distribution across multiple sources as examined in Chapter 5, encourage exchange and discussion of information, fuelling overall lore engagement.

#### 6.6.4 Q2\_4: Are modders motivated primarily by the possibility of extending *The Elder Scrolls* world, or the possibility of self-expression regardless of the game world?

With the survey sample, *Skyrim* modding was also visibly an expression of fandom. It seems low-skill modders enter the community because they enjoy modding and seek to fix the problems they perceive in the game, but over time as their skill improves the emphasis shifts away from fixing problems to the game world and personal fulfilment. As skill and experience grew for modders, the desire for artistic self-realisation did not replace, but grew alongside the concern for maintaining lore-friendliness: this

was self-realisation *through and within TES*. In alignment with the importance of personal fulfilment, modders differ to the encyclopaedists in their community engagement. The community does not become a more important motivation as skill and engagement increases; modders appear to be more goal-driven in their engagement.

A final issue is monetisation. If working for free is economic exploitation (Terranova, 2013), modders are not only tolerant of being exploited, but adamant this is precisely how modding should work.

Monetisation is a matter of active controversy in the *TES* community<sup>83</sup>. Their investment in the idea of free mods also sets a firm boundary to the possibilities of co-creation as presented by Banks (2013), as was made clear during Bethesda's abortive mod monetisation scheme (Bethesda Game Studios, 2015).

#### 6.6.5 Q2\_5: How do encyclopaedists operate, and how do their practices change with level of engagement?

For encyclopaedists, earlier studies from Squire (2011) and Hunter (2011) had shown encyclopaedists gather solid, reliable data and subject their work to extensive debate. The present study reveals in more detail encyclopaedists are true researchers, who do not rely on memory, but gather data through careful, multi-lateral research. Every form of research applied to texts (though not audiences) used in in game studies can be found here, as well as data mining methods. The combination of modder and encyclopaedist interests in some individuals is important for the latter, as modders bring onboard Construction Set/Creation Kit expertise.

Like in Hunter's (2011) description of the WowWiki, more active encyclopaedists frequently collaborate on articles with other users. They seek out aid for data collection and verification, and in turn offer help to others. Encyclopaedists also learn new skills, though the mechanisms of learning are not new: they learn by practice, by example, and through the community's assistance.

#### 6.6.6 Q2\_6: How do modders operate, and how do their practices change with level of ability?

The modding segment confirms earlier arguments by Squire (2011), Gee (2013), and Poor (2014), concerning a relationship between growing skill and growing depth of practical engagement. The most highly skilled modders were the most active ones, most connected in vertical and horizontal networks of collaboration through sharing of assets and works between modders as well as large-scale group projects. They also made the greatest effort to learn new skills. Unfortunately, the study did not provide enough scope in responses to new skills learned, concentrating on technical skills. One respondent

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<sup>83</sup> This controversy goes beyond the present survey. To future researchers, the author would humbly suggest asking especially modders how they feel about YouTubers who produce monetised videos based on the work of other fans. The responses may be interesting indeed.

noted learning about geography, and perhaps others would have also mentioned humanities skills had these been included directly in the survey.

Most modders work alone, or collaborate with two or three friends. There are few mid-sized teams; the next step is to transition to the large 20 or more person teams employed by projects like *Tamriel Rebuilt*, *Skywind* or *Beyond Skyrim*. The community does not replace personal expression as a motivator for advanced modders, but it empowers them to amplify their ambitions.

#### 6.6.7 Q2\_7: Is there a relationship between long-lasting encyclopaedist PAS involvement and higher levels of engagement with the game's cultural content?

The hallmarks of fandom observable in the results also respond to the question of whether *TES* fans are engaging with the cultural world or with the game itself. Those engaging with the game more than the world tend to be less active; they are more likely to invoke the similarity between the game and their personal non-*TES* interests as a motivating factor in their engagement. Probably in the future, some will ramp up their engagement with the community *and* with *TES* as a world, while others will set the game aside and drift away from the community.

While more active encyclopaedists had worked on a broader range of content, it was paradoxically typical for them to report concentrating on fewer areas than their less active counterparts. Possibly less active users were exploring relatively niche interests, and seeking to fill the gaps unfilled by the more active cohort. However, it may also be the more active cohort simply had difficulty identifying specialties, due to their wide-ranging contributions across the field. Interestingly, when participants were asked about areas they specialise in by choice, the more active group now pointed to a much wider variety of topics than they had identified as their core contributions. The reverse was true for less active participants, whose specialisations centred only around, characters, locations, and history.

Most respondents spent far less time working on *Skyrim* content for the UESP than they did working on *TES* content in general. The lack of work on *Skyrim* content is unsurprising given the breadth and depth of existing UESP content for *Skyrim*, but it is another indicator of the participants transcending an interest in one game, into a cultural interest in the game world.

When asked about overlap between *TES* and other interests, the less active participants were more likely to identify such a relationship. The implications of this are not clear. It may be the very active users, like many fans, find their personal connection to their object of affection too strong to be able to easily analyse its connection to other interests (Hills, 2002). However, it is also likely less active users would have been drawn to *Skyrim* because it matched their interests, and remained less active because this interest in the game did not yet transcend into a deeper imaginary world engagement.

### 6.6.8 Q2\_8: Is there a relationship between long-lasting modding PAS involvement and higher levels of engagement with the game's cultural content?

As with encyclopaedists, the more active *TES* fans are, the more they are interested in the *TES* world. Modder interests in deeper cultural content was reflected in the trajectory of mod types developed by low-skill to high-skill modders. The low-skilled modders were more likely to concentrate on 'easy' mod types such as companion mods, and thus less likely to exhibit the ultimate modding indicator of cultural engagement: an attachment to lore-friendliness. Highly skilled modders valued lore-friendliness, and consequently reported high levels of lore research in connection with their modding work.

Beyond *TES*, modders also researched other fantasy settings or real-world cultures for inspiration. There was a sharp increase in real-world tangible culture research for the high-skill group, which could be associated with the research needed to prepare concept art for the large-scale projects (e.g. Tamriel Rebuilt Community, 2009).

However, research into other worlds did not mean using *TES* modding as a vehicle for the creation of mods using elements from other settings. The importation of fantasy elements was rare, and well illustrated by the comment one highly skilled modder made to explain working with *World of Warcraft* elements: "[..] I was young and needed the attention!" (Survey, Mod\_28). The import of real-world cultural elements is more likely, particularly when dealing with material elements. Research into real-world cultural elements increased for highly skilled modders; however, their work was likely to be more, rather than less, focussed on maintaining lore-friendliness. The most dedicated participants of the *TES* passionate affinity spaces, whether modders or encyclopaedists, are ultimately there for *The Elder Scrolls*.

A final note is needed concerning controversial and sexualised content. Given the risks the existence of these forms of modding pose for the opening of heritage projects to modders, the author had initially intended to formulate a sub-question of RQ2 focusing on this issue. However, properly exploring this area would have required including in the survey sharp questions with the potential to alienate many of the respondents and weaken the overall survey. However, the most typical form of sexualised content is probably the scantily-dressed 'sexy' NPC companion mod, and the survey indicated companion mods are mainly produced by young and inexperienced modders; skilled modders only rarely report companion mods as a significant part of their overall oeuvre. More controversial mods tend to be relatively hidden from public view. The dominant publication site, Nexus Mods, limits visibility of 'adult' mods on an opt-in basis. There may be other limits imposed on the content published through the site, as more controversial mods tend to instead show up on low-profile sites like Loverslab (Majkowski, 2016), which in this case were rarely mentioned by modders.

### 6.6.9 Study limitations

Before the broader implications for heritage can be discussed, a final caveat is needed concerning the limitations of the study. The study did not attract a large sample. One reason for this may be the reliance on websites and fora as a form of contact with communities, without employing social media. Johnson (2013) reported most of her participants reached her through social media. However, Johnson was interested in all *Skyrim* players; the author chose to avoid broad social media usage to ensure the survey reached PAS members rather than a general *Skyrim* population.

Another reason for the limited sample size is likely the relative age of *Skyrim*, and therefore a natural decline of the community. Life cycles of online communities are poorly studied; longitudinal studies such as Poor's (2015) study of *World of Warcraft* guilds, are rare and narrow in scope. Nonetheless, it is reasonable to assume a game community for a moddable RPG would be at its strongest one or two years after the game's release. This would be the point when the modding community has had time to acclimatise to the game's modding tools without yet being distracted by newer releases, while the lore community has had time to explore the game in depth, without yet having processed all the knowledge into encyclopaedic content. It may be Johnson (2013) was able to attract participants rapidly not only because of social media, but also because her study was conducted two years after *Skyrim*'s release.

If this is the case, the present study was conducted four years too late to see the *Skyrim* community at its peak. Instead, there is much evidence in the sample to suggest the author has found a community in advanced decline. The more casual gamers attracted to *Skyrim* as a new and exciting game have mostly come and gone, leaving behind a hard-core component, those whose engagement with *Skyrim* or a previous game has developed into a long-term attachment to *TES*. This conclusion is based primarily on two factors. The first is the difficulty in attracting respondents from multiple sites over a three-month period. The second factor is the skewing of *Skyrim* play time in the sample; most respondents played *Skyrim* more than 300 hours, and there were only 13 respondents who had played the game less than 100 hours: less than five percent of the sample. Many respondents reported spending little time playing *Skyrim* or working on *Skyrim* content, whether for the UESP or through modding. In Ha and Yun's (2011) prosumer classification, they were contributors. However, given their total playtime, their self-reported expertise and, in the case of the encyclopaedists, the time they reported spending on their UESP work for the series as a whole, in the past they must have consumed more, either as enthusiasts or spectators. The survey's narrow focus on sites of modding and encyclopaedic activities rather than the broad totality of *Skyrim* fans, and the length of the survey probably contributed to driving off more casual players and concentrating on the hard-core elite.

The survey was also limited by a range of small methodological flaws. Some questions were unclear, in at least one case leading to evident confusion among respondents. Some questions had insufficient response ranges. For example, the total *Skyrim* play time question, which should have allowed responses higher than 300 hours; elsewhere, modders were only asked about technical skills, but not humanities knowledge acquired. Finally, the modding and lore sections were not sufficiently symmetrical in the questions asked; full symmetry was impossible due to the different concerns of modders and encyclopaedists, but more symmetry was possible. One example is the weekly time commitment question; where encyclopaedists were asked about total UESP time commitment and *Skyrim* time commitment, modders were only asked about time commitment for *Skyrim* modding. While the objective of the survey was to analyse the *Skyrim* modding community specifically, this omission nonetheless curtails interpretation. Where high-skill modders reported low time investments into *Skyrim* modding, they could still be engaged with the series, modding other *TES* games.

The survey offers a limited snapshot of the *Skyrim* community, illustrating active *Skyrim* PAS participants in early 2017, half a decade after the game's release. Any online convenience sample will lack generalisability, but this is especially true here. Nonetheless, the snapshot reveals a community intensely engaged with the imaginary world and its culture; the heritage implications of this fact are discussed next.

## 6.7 Cultural heritage implications

Most narrative-driven games are not mod-friendly. There is no large *Assassin's Creed* modding community, because the series not designed to facilitate modding. Additionally, many heavily modded games, even RPGs, do not show the attachment to the game *world* the *TES* community shows. In this aspect, *Skyrim* stands in stark contrast to *Mount & Blade*; both games have vibrant and ambitious modding communities, but *Mount & Blade* modders devote little attention to lore-friendliness; the most prominent *Mount & Blade* mods are gameplay enhancements or total conversions, though some of the latter are interesting as explorations of heritage (Majewski, 2017a).

*The Elder Scrolls* as a franchise is notable and unusual in successfully combining two characteristics seeming to stand apart in most other game franchises; namely, an engaging world, and moddability. Paradoxically, this success partially obscures the CH implications of modding. The survey showed *TES* fans have little interest in incorporating real-world cultures into their work, except where such cultural content can be fitted coherently into the *TES* world. Outside of academic-driven projects like *Hysteria* (Goins, Egert, Phelps, Reedy, & Kincaid, 2013) or the earlier *Morrowind*-based works described by Champion (2012b), *TES* does not provide convincing examples of CH mods.

In fact, however, hundreds if not thousands of *Skyrim* mods explore heritage: the fictional heritage of Nirn. Their creators devote great effort to maintaining cultural accuracy under the guise of lore-friendliness. *Skyrim* should be viewed as an example of the cultural engagement fostered by a game with the strong world-building and world-depiction practices explored in Chapter 5. These practices seem likely connected to the modders' and encyclopaedists' fascination with *TES* lore, and can be imitated to achieve a similar outcome for CH projects. Such a project could lead to encyclopaedist and modding engagement with the project, both of which offer fascinating possibilities. Modders who seek to express themselves within the constraints of a CH world could contribute to its expansion and improvement, while themselves also researching and learning about its culture. As confirmed by the survey, modding also provides an entry point for game development skills (Champion, 2012b); An indigenous heritage project could encourage indigenous players into modding and improved digital literacy and design skills (Anderson & Courtney, 2011).

*Skyrim* fans invest time into collecting, debating and disseminating knowledge about the *TES* world. Once again, *Skyrim* seems to be relatively unique among narrative-driven open-world games, as the analogous efforts for the sprawling *Assassin's Creed* series<sup>84</sup> or the RPG *The Witcher* (2007-2015) series<sup>85</sup> are less successful, with less than 10,000 articles each. *Skyrim*'s lore community is strong because the game makes knowledge collaboration useful to counter the game's minimalist tactics. If a game is deep enough, sufficiently connected to external content, and – paradoxically, for a CH project – sufficiently willing to *refuse* to provide players with information, it may lead its fans to encyclopaedic engagement, to pursuing their own research on the game and on the culture in question, as is the case for *Skyrim* fans. A small but dedicated group of players would effectively become cultural advocates.

Fan-like engagement and involvement could be valuable for indigenous heritage, where one of the problems is cultural apathy (Trudgen, 2000) and a sort of refusal to carry on the culture. However, given the unique challenges of indigenous CH and their implications both for building a cultural RPG, and for allowing player engagement, the expert views on these aspects needed to be examined. The next chapter reports on the interviews conducted with experts from game design, heritage, and virtual heritage fields.

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<sup>84</sup> [http://assassinscreed.wikia.com/wiki/Assassin%27s\\_Creed\\_Wiki](http://assassinscreed.wikia.com/wiki/Assassin%27s_Creed_Wiki)

<sup>85</sup> [http://witcher.wikia.com/wiki/Witcher\\_Wiki](http://witcher.wikia.com/wiki/Witcher_Wiki)



# Chapter 7: Expert opinions on cultural heritage RPGs

## 7 Expert opinions on cultural heritage RPGs

This chapter reports the outcomes of the expert interviews from the third study. Research Question 3 (RQ3) is broken down into five sub-questions (Q3\_1 through to Q3\_5) as presented here.

3. What core game and project design features can be identified that would support the dissemination of indigenous cultural heritage in open-world RPG games?

- a. In terms of world-building?

Q3\_1: What strategies could world-building employ in situations where substantial cultural loss has occurred?

Q3\_2: What aspects of *intangible* indigenous cultural heritage are most important to disseminate?

Q3\_3: What aspects of indigenous *natural* heritage are most important to disseminate?

- b. In terms of supporting appropriate cultural management mechanisms and indigenous audience engagement?

Q3\_4: In what ways would the protocol-based model of cultural management need to be adjusted to take into account the open nature of PAS engagement?

Q3\_5: What consideration needs to be given to limited technological access and digital literacy in some indigenous communities?

Twenty-four experts from the fields of traditional (non-digital) cultural heritage (CH), virtual heritage (VH), and video games were contacted from April to September 2017, including both scholars and practitioners (Table 36). Twelve were interviewed, producing a 50% return rate. Of the remaining 12, five failed to respond entirely, one did not respond but referred another expert to the author, three declined the interview, finally, three agreed to participate, but were ultimately unable to schedule an interview. The experts were interviewed under confidence unless they chose to be named, and ultimately all but one preferred to be named. During the study, ten other experts were identified, but were not contacted due to project constraints.

Participant	Location	Indigenous?	Category	Date
1 – Respondent 1	Australia (NSW)	Yes (Aboriginal)	Heritage	2017-04-07
2 – Lexene Busbridge	Australia (QLD)	Yes (Aboriginal)	Heritage	2017-04-06
3 – IN CONFIDENCE	Australia (VIC)	Yes (Aboriginal)	Heritage	DNP*
4 – IN CONFIDENCE	Australia (NT)	No	Heritage	DNP
5 – IN CONFIDENCE	Australia (ACT)	No	Heritage	DNP
6 – IN CONFIDENCE	Australia (QLD)	Yes (Aboriginal)	Heritage	DNP
7 – IN CONFIDENCE	Papua New Guinea	Yes (PNG national)	Heritage	DNP
8 – Michał Mochocki	Poland	No	Heritage	2017-05-20
9 – IN CONFIDENCE	USA	Yes (Native American)	Heritage	DNP
10 – Brett Leavy	Australia (QLD)	Yes (Aboriginal)	Virtual heritage/Games	2017-09-25
11 – Bernadette Flynn	Australia (NSW)	No	Virtual heritage	2017-07-19
12 – Kit Devine	Australia (ACT)	No	Virtual heritage	2017-08-03
13 – IN CONFIDENCE	Australia (NSW/NT)	No	Heritage/Virtual heritage	DNP
14 – IN CONFIDENCE	Switzerland / Australia (NSW)	No	Virtual heritage	DNP
15 – Sara de Freitas	UK / Australia (WA)	No	Virtual heritage	2017-08-10
16 – IN CONFIDENCE	Malaysia	No	Virtual heritage	DNP
17 – IN CONFIDENCE	New Zealand	No	Virtual heritage	DNP
18 – IN CONFIDENCE	USA	Yes (Native American)	Virtual heritage	DNP
19 – Elizabeth LaPensée	USA	Yes (Native American)	Virtual heritage/Games	2017-05-11
20 – Amy Fredeen	USA	Yes (Native American)	Virtual heritage/Games	2017-07-14
21 – IN CONFIDENCE	USA	No	Games	DNP
22 – Ken Rolston	USA	No	Games	2017-09-14
23 – Jesse Schell	USA	No	Games	2017-06-30
24 – Kurt Squire	USA	No	Games	2017-08-11

Table 36 Summary of expert interview candidates and outcomes

\*DNP = Did not participate

Non-digital heritage experts included Respondent 1, a traditional descendant of the Gudjinburra-Bundjalung from the New South Wales-Queensland border area, who trains public and corporate clients on Aboriginal culture, Lexene Busbridge from the Jellurgal Cultural Centre<sup>86</sup>, which showcases the local Aboriginal CH of the Gold Coast where the researcher was based. As Aboriginal Australians, Respondent 1 and Busbridge did not only illustrate the perspective of traditional heritage practitioners, but also represented indigenous Australian interests. Finally, Michał Mochocki from Poland is a scholar who has

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<sup>86</sup> <http://www.jellurgal.com.au/>

developed live-action non-digital game-based projects for CH (cf. Mochocki, 2011; Mochocki, 2012). The author was unable to get a response from any larger Australian public institutions for heritage, such as state museums. The absence of heritage experts from these large institutions is a loss for the overall quality of the data pool; however, most of the interviews highlighted the need to focus on individual communities, a fact standing in opposition to any large-scale solutions. Consequently, the seeming disinterest of national institutions is unlikely to have significantly affected the overall findings, and may be a secondary confirmation of this aspect of the findings.

In VH, a key respondent is the Aboriginal developer Brett Leavy whose *Virtual Songlines*<sup>87</sup> projects (Leavy, 2014) were a point of reference for this thesis. Bernadette Flynn is a scholar based in New South Wales, whose doctoral dissertation, *Neolithic Maltese Temple* (Flynn, 2012) was a complex virtual reconstruction of prehistoric tangible and intangible heritage. Kit Devine is another Australian scholar, based at the Australian National Institute, who as part of her doctoral dissertation created *Virtual Sydney Rocks*, a heritage reconstruction of a part of Sydney; Devine is working on other VH projects, including a reconstruction of an Aboriginal community in north Sydney. Finally, Sara de Freitas is a UK-based scholar, co-founder and former director of the UK Serious Games Institute<sup>88</sup>, and has contributed to several VH projects (e.g. Anderson, et al., 2009).

Straddling the division between VH and games studies/development were Elizabeth LaPensée and Amy Fredeen, both Native Americans, the former a scholar, VH practitioner and games developer<sup>89</sup>, and the latter a staff member at the Cook Inlet Tribal Council in Alaska, co-responsible for the development of the commercial game *Never Alone* (Cook Inlet Tribal Council, 2017). Due to her diverse experiences, Elizabeth LaPensée was treated as both a VH expert and a games expert, and responded to two sets of primer questions.

Finally, three games scholars/developers were interviewed, all non-indigenous Americans. Ken Rolston is a retired RPG game designer with 30 years of experience in both tabletop and digital RPGs, who served as the lead designer of *Morrowind* and *Oblivion*. Rolston was not involved with *Skyrim*, but was well-positioned to speak to the strengths and weaknesses of commercial open-world RPGs. Jesse Schell has authored a textbook on video game design (Schell, 2015), and heads a game development studio<sup>90</sup>,

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<sup>87</sup> <https://www.virtualsonglines.org/>

<sup>88</sup> <http://www.seriousgamesinstitute.co.uk/>

<sup>89</sup> LaPensée has published papers as Dillon (e.g. 2008; 2012), Lameman (e.g. Lameman & Lewis, 2011), and LaPensée (e.g. 2011).

<sup>90</sup> <https://www.schellgames.com/>

providing another industry voice. The last was Kurt Squire, a video game scholar exploring the educational application of video games (cf. Squire, 2011).

The semi-structured interviews varied in length from about 45 minutes to more than two hours. Thirteen main questions were asked (Appendix F), with the author occasionally asking additional questions to drill down into responses. Interviews were conducted in real-time, either live or via Skype. One respondent chose instead to record the responses remotely, answering follow-up questions via email. The interview was divided into three sections; while the world-building and cultural management sections directly corresponded to RQ3 components, the initial primer section served primarily to provide background context.

## 7.1 Primer data

The main purpose of the primer questions was to prepare the respondents for the rest of the interview by encouraging them to consider the topic of discussion through the prism of their own experiences. The responses also provided background data.

### 7.1.1 Traditional heritage experts

The traditional heritage group included Respondent 1, Busbridge, and Mochocki. Table 37 summarises their primer responses.

(Traditional Heritage)	1A: What are the strengths of your heritage projects for showing and teaching indigenous culture?	2A: What does not work, or needs improving with these projects?	3A: Have you looked into the incorporation of digital games into your CH projects?
<b>Respondent 1</b>	Alignment with traditional knowledge and knowledge management	No major issues	No, never
<b>Lexene Busbridge</b>	Alignment with traditional knowledge and knowledge management	No major issues. Affected by participant willingness to engage	Yes, but too expensive
<b>Michał Mochocki</b>	Strong social interactions (LARP), alignment with heritage form	No major issues. Affected by participant willingness to engage and prior knowledge	Yes, but too expensive

*Table 37 Traditional expert primer response summaries*

All respondents expressed satisfaction with the heritage methods they were using, with a particular strength identified by Aboriginal respondents being the possibility of aligning their methods with traditional knowledge and knowledge management. Suggested improvements were evolutionary rather than revolutionary. Busbridge and Mochocki both noted their methods relied on participant interest and

prior knowledge to drive the process of transmitting heritage. Both also had considered using VH or video games, but found such solutions financially impossible.

### 7.1.2 Virtual heritage experts

The VH experts included Leavy, Fredeen, LaPensée, Bernadette Flynn, Devine, and de Freitas (Table 38).

(Virtual heritage)	1B: What are the strengths of your digital heritage projects for showing and teaching culture?	2B: What does not work, or needs improving with these projects?	3B: Are there any video games that have inspired you in developing digital heritage projects?
<b>Brett Leavy</b>	Accessibility to lost heritage, kinaesthetic immersion	Satisfied, but plans for improvement in development tools capability, multiplayer. Limiting factor: time and funding	Many games especially survival and MMORPGs. Photorealism as inspiration for levels of visual authenticity
<b>Bernadette Flynn</b>	Sense of embodiment (in large VR system)	Immobility of VR setup, restricted audience access. Limiting factor: time and funding	Prototype in Unreal. Gameplay as constraining factor
<b>Kit Devine</b>	Cultural immersion	Lack of people in virtual environment. Limiting factor: time and funding	<i>Assassin's Creed</i> powerful in cultural immersion, but problematic: commercial considerations driving factor
<b>Sara de Freitas</b>	Feedback loop between developer and audience	Ability to take project from proof-of-concept to full market release. Limiting factor: time and funding	<i>Civilization</i> series and <i>Total War</i> series. Unity game engine for development provided both affordances and limits
<b>Elizabeth LaPensée</b>	Interactivity and multimodality	Limited audience access to technology, demanding focus on low-end systems. Limiting factor: time and funding	<i>Virtual Songlines</i> , but no details provided
<b>Amy Fredeen</b>	Audience accessibility	Satisfied but still noted time and funding as limits	Not in heritage terms, only in terms of gameplay

Table 38 Virtual heritage expert primer response summaries

The strengths of VH methods identified by respondents included audience accessibility, immersion, and the greater overall depth and range of sensory connections between player and heritage. For Leavy, VH offers the possibility of “*kinaesthetically allowing users or players to walk on country and to engage with objects of significance, or sites of significance,*” (Leavy interview, Q1B), to directly interact with lost Aboriginal heritage. Fredeen noted *Never Alone* aimed to reach youth audiences who may be comfortable with video games than with traditional cultural activities. LaPensée highlighted the ability to combine other media such as art and sound with interactivity. Flynn concentrated on the sense of embodiment and the sensory gestalt-like experience her participants reported:

*“One was that people had a sort of synesthetic response, so they would say things like, I can smell the temples, I can smell the caves. They felt the presence of other beings.” (Flynn interview, Q1B)*

Devine also concentrated on immersion as a strength, especially the cultural immersion afforded by a populated VH world. She noted the difference a population creates for cultural immersion can be observed in the *Assassin’s Creed* series.

De Freitas, who discussed the EU-funded cultural integration app *MASELTOV* (2015), highlighted the possibility of gathering and analysing, and then responding to, user feedback. Interactive applications, provide the user with feedback on their progress, and are responsive to feedback. An application can also gather user data to transmit back to the developers, providing opportunities to track the users’ progress through the application’s contents, and to improve the application based on user feedback.

In discussing their projects’ weaknesses, VH experts focussed on time and funding as limiting factors. Leavy, LaPensée, Flynn, and Devine saw additional technologies or features they would like to explore, but cannot due to lack of funds. Perhaps most poignant was de Freitas’ summary of serious game outcomes:

*“A lot of the experiences in serious games have been similar, you get some start-up funding, you do some initial work, you’ll probably get it out to a certain number of users, but you won’t then be able to really get it to market. We’ve only had a couple of games that have really been able to transcend, and even then probably not as successful as you’d want them to be.” (de Freitas interview, Q2B)*

Pointing to the virtual reconstruction of ancient Rome under the title *Rome Reborn* (2007-2008), de Freitas said the team was only able to produce a proof of concept, to glimpse *“what it could be like to have a genuine learning environment set in a different period of time”* (de Freitas interview, Q2B), but not to actually realise such a learning environment.

When discussing VH inspirations, commercial video games did not emerge as a source of inspiration except for Leavy, Fredeen and Devine. Flynn noted the combat gameplay bias imposed by the *Unreal* engine she initially used for prototyping.<sup>91</sup> Devine who earlier pointed to *Assassin’s Creed* as an example of cultural immersion, also noted the series is problematic from a heritage perspective, because its developers sometimes alter historical sites for gameplay and narrative considerations.

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<sup>91</sup> This is further documented by Champion (2012b).

For Fredeen, few games were inspiring, and typically for their gameplay rather than heritage capacity. However, she notes RPGs were not examined in any detail, as the company quickly settled on a small puzzle-platformer game. By contrast, Leavy regularly tries new games, particularly survival-oriented games and massively multiplayer RPGs, appreciating the high levels of photorealism which match his vision of photorealistically accurate cultural knowledge:

*“[T]hose games inspire me, because the authentic nature of what we’re trying to achieve, needs to be real, because that is the historical or cultural knowledge that we want to display.”* (Leavy interview, Q3B)

### 7.1.3 Video game experts

The game expert group included LaPensée, Schell, Squire, and Rolston (Table 39).

(video games)	1C: What are the strengths of RPGs when it comes to showing and teaching new cultures?	2C: What does not work, or needs improving in RPGs (for culture)?	3C: Are you familiar with any digital heritage projects or serious games that do a strong job of showing and teaching about real cultures?
<b>Elizabeth LaPensée</b>	Immersion, investment with long-term goals	Orientation towards material-driven quests i.e. taking and grabbing alien to indigenous world-view	Own productions, with unique game mechanics oriented towards specific cultural purposes for narrow cultural group
<b>Ken Rolston</b>	Simulational aspect (limited in commercial RPGs), development tools for rapid prototyping through mods	Commercial game inspirations raise danger of choosing games as method because it’s ‘sexy’; better to use modding capabilities for non-commercial; limited range of mainly combat-oriented verbs	No. Only vague awareness of <i>Virtual Songlines</i> .
<b>Jesse Schell</b>	Immersion, mechanics oriented to interaction with world and characters	Core challenge loop oriented towards combat and progressively bigger opponents	Lack of familiarity with others. Own VR production of Mesopotamian palace integrated into exhibition of tangible cultural objects
<b>Kurt Squire</b>	Immersion, stylisation of game towards specific world-views (i.e. procedural rhetoric)	Limited range of verbs available for interaction, clash between high-fidelity visuals and low-fidelity interactions	<i>Revolution</i> . Benefitted from integration with Colonial Williamsburg living heritage site and research

Table 39 Video game expert primer response summaries

As with VH, the games experts pointed to immersion in place as a strength of RPGs. LaPensée also noted RPGs invested players with long-term goals to continue playing. In turn, Schell said RPGs use mechanics to push the players towards the exploration of both space and society. Squire delved deeper into immersion, dwelling on the possibility of stylising the virtual world towards a specific culture by imbuing the game experience with that culture’s world-view. However, he also warned stylisation means



designing within the constraints of the technologically possible, which can lead to dissonances between a high-fidelity visual world and low-fidelity interactions within that world.

Rolston cautiously noted commercial RPGs focus mechanically on a narrow range of narrative and simulation interactions, especially combat. However, he also highlighted the value of the simulational aspect of RPGs, which potentially allow a deeper, experimental investigation of various aspects of culture. Furthermore, he said *Skyrim's* editing tools could allow a developer to experiment with implementing Aboriginal culture as a non-commercial mod for *Skyrim*.

In discussing RPG weaknesses, all game experts expanded on Rolston's critique of limited mechanics in commercial RPGs. Squire invoked the concept of verbs, the range of actions available to players (cf. Schell, 2015). The limited range of verbs leads to a clash between expectations of what should be possible to do in the virtual world, versus what is actually possible. Schell noted the RPG is structured around player progression in ability and challenge, easiest to achieve using progressively bigger monsters, undesirable in real-world settings. LaPensée's gameplay critique centred around cultural perspective:

*"So, it's all about taking and counting. So, get – go grab ten herbs of this kind. Go kill fifty of this particular kind of monster, whatever else, right? And so you go and you do, and you kill and you take, and you go back and you get your reward for having completed that quest."* (LaPensée interview, Q2C)

LaPensée contrasts this with how indigenous cultures approach nature:

*"Whereas in an approach at least from my perspective as Anishinaabeg way would be that you need to know the name of the plant, you need to remember the name of that plant, you need to honour that plant, and you need to tend or caretake that plant. You know, clear if it's got weeds around it, you gotta clear that, or maybe if there's some dead leaves, you gotta help clear that, or maybe there are branches on the bottom that are preventing growth up top, you gotta help clear that, and then you get what you need from that plant to use in the game."* (LaPensée interview, Q2C)

Rolston himself did not expand further on his earlier gameplay comments, concentrating instead on the need to match indigenous cultural needs with the most appropriate medium. He warned of using games merely because they are considered 'sexy', when they may not be appropriate. Rolston invoked *Never Alone* as an example, noting *Never Alone's* great strength was its accessibility for the user, but similar accessibility could be achieved in a children's book.

When asked about successful examples of VH projects, all noted the relative lack of such examples or familiarity therewith, with LaPensée, Schell and Squire all referring to their own productions. LaPensée noted her own productions concentrate on unique, culturally appropriate game mechanics, and tend to concentrate on small audiences like communities. Schell's discussed a museum project in which the virtual experience was used to provide context for better understanding of tangible physical artefacts in their original setting. Finally, Squire mentioned *Revolution* (Francis, 2011), noting the game team collaborated with the Colonial Williamsburg living heritage site, benefitting from Williamsburg's research.

The primers provided insight into the experts' past projects and experiences. Some of these projects were digital, some were RPGs, and some involved indigenous CH. In the subsequent sections of the interview, the experts were asked forward-looking questions focusing on potential future RPG projects exploring indigenous CH. These questions were divided into three main sections, dealing with world-building and heritage, cultural management mechanisms, and finally natural heritage.

## 7.2 World-building and heritage

The first set of topical questions investigated issues associated with the first three RQ3 components (Table 40). These included world-building strategies in situations where cultural loss has occurred, intangible indigenous culture, and indigenous natural heritage.

	RQ 3 Component	Interview Questions
<b>World-building</b>	Q3_1: What strategies could world-building employ in situations where substantial cultural loss has occurred?	4-6
	Q3_2: What aspects of intangible indigenous CH are most important to disseminate?	7-8
	Q3_3: What aspects of indigenous natural heritage are most important to disseminate?	9

Table 40 The distribution of interview questions across RQ3 components (Q3\_1-3)

### 7.2.1 RQ3\_1: Strategies for world-building (interview questions 4-6)

In this section, the first two interview questions challenged the respondents to imagine and describe an RPG depicting a historical, and then a contemporary indigenous community. The last question invited respondents to consider the impact such a game would have on that community, with the aim of encouraging interviewees to consider game content through the prism of desired outcomes (Table 41).

	4: I want you to imagine an RPG exploring the historical cultural heritage of an indigenous community. What would that game look like?	5: How about an RPG that would be set in the present day of an indigenous community?	6: What impact do you think it might have on an indigenous community to see an RPG game developed specifically around their cultural heritage?
<b>Respondent 1</b>	Depends on community, but player roles should be constrained by appropriateness	Should still show traditional activities	Massive impact as digital culture exists even in remote communities, but no Aboriginal content. Games a means to supply knowledge
<b>Lexene Busbridge</b>	A day in the life of indigenous person in concrete culture and place; stories about places; something like <i>Virtual Songlines</i>	Showcase Aboriginal continuity and adaptation into modern times, cultural practices	Positive and inspirational, connect old traditions to modern day people
<b>Michał Mochocki</b>	Natural environment important; social groups and roles; play as child to experience growth into culture	If possible, movement between traditional community and city; showcase balancing two worlds	Role-playing awakes interest, immerses individual in experience, can connect past events to personal experience
<b>Brett Leavy</b>	<i>Virtual Songlines</i> ; day in life of young Aboriginal person; rites of passage; historical landscape	Hard to say, better to look at the past	Communities proud and impressed with <i>Virtual Songlines</i> ; emotional reactions; reconnect to lost country
<b>Bernadette Flynn</b>	Maybe not naturalistic, to highlight speculative nature of game; consider multiplayer world or augmented reality	Interactive soundscape, where recorded stories integrated into " <i>landscapes that speak</i> "	Can reignite community interest in own history; can build capacity and resilience
<b>Kit Devine</b>	Depends on place, as access to historical-cultural information varies; accuracy will be challenging, artistic license involved	Recent past based on oral accounts to depict day in the life	Tremendous impact of being represented; preservation value; capacity for multiplicity of stories
<b>Sara de Freitas</b>	Time travelling player to visit past community, experience life in historical setting framed in time-travel narrative	Educational/empathy value in role-playing; present-day setting may lose richness of cultural history;	Depends on community
<b>Elizabeth LaPensée</b>	Response requires prior consultation with community	Showcase day-to-day experiences that build resilience	High impact, indigenous culture in media; could showcase environmental problems
<b>Amy Fredeen</b>	Showcase land, lifestyle, community roles and collaboration	Showcase transition from traditional community to city. Highlight challenges, adaptive strategies	Gives indigenous people place in popular media validation; connects mainstream with indigenous culture
<b>Ken Rolston</b>	Historical simulation development as research; avoiding visual realism may result in emotionally compelling game	Can be done commercially, like Maori films; cultural elements can also be used in science-fiction	Hard for respondent to relate, but likely very gratifying for indigenous people to develop such game
<b>Jesse Schell</b>	Depends: what do we want to preserve; how to best turn it into game experience	Day-to-day activities and challenges, e.g. <i>We Are Chicago</i>	Respondent unable to judge impact
<b>Kurt Squire</b>	Highlight authorial voice; challenge genre tropes; consider VR; decide what aspect of culture to be depicted	Visiting indigenous communities can be eye-opening; could be problematic due to multiplicity of points of view	Seeing own people represented has " <i>overpowering</i> " impact

Table 41 Expert response summaries (Q4-6)

#### 7.2.1.1 Interview question 4: I want you to imagine an RPG exploring the historical cultural heritage of an indigenous community. What would that game look like?

For many respondents, there was one point of agreement: *“it depends”* (multiple respondents).

Respondent 1 emphasised the possible variations, as player activities should be limited to what is culturally appropriate for the given role in given community. LaPensée argued the question cannot be answered without prior community consultation:

*“I have to be careful in answering this question, because in a way it really is not up to me. I would actually go to elders to have this question answered, and would want to be working very meaningfully on a game before really going forward myself with imagining what this should look like.”* (LaPensée interview, Q4)

Speaking from an industry perspective, Schell agreed any developer must first come to understand the problem as deeply as possible to provide an optimal solution.

For Leavy, the *Virtual Songlines* project is the response: a survival-oriented RPG where the player is a young Aboriginal, experiencing everyday life and special events like rites of passage and initiation. *Virtual Songlines* also attempts to tackle the challenges of cultural loss, reconstructing lost and poorly-documented sites:

*“[W]e’re now exploring that where each capital city and regional town exists, [...]. In doing that, we’re looking to those places where the most cultural destruction, the most destruction of the languages and the heritage values occurred, [...] we’re going back to that moment when that culture was intact, and practiced and experienced, and had been for millennia.”* (Leavy interview, Q4)

However, Devine warned about the different levels of cultural knowledge retained by different communities, and the problem of historical accuracy:

*“If you’re doing a game that’s set up in the [Australian] Northern Territories, then I think you’ve got a lot of people that you can talk to. But if you’re trying to do a game that’s telling the Aboriginal heritage of Sydney there is so much that has been lost, and there is much disagreement within local Aboriginal groups about what remains of their culture and language, that I think an inhabited virtual heritage game would contain too much speculation and not enough fact to be credible.”* (Devine interview, Q4)

Devine further elaborated on the risk a poor historical record poses for heritage, arguing reliance on few sources forces a subjective perspective on a project. To offset the problem of subjective perspective for accuracy, Squire recommended highlighting the authorial voice in the game, showing clearly who the author is, and why the author made these decisions on the game's interpretation of the culture in question. Flynn proposed a less naturalistic, recognisably artificial world to prevent the perception of accuracy accompanying realistic graphics. Beyond the scope of this research, Flynn also highlighted the potential value of a co-creative multiplayer world.

Rolston argued a simulation-oriented RPG could provide a research tool for the examination of historical knowledge, by providing the possibility of combining known aspects of culture with hypotheses about lost cultural elements. The process of developing a game would thus possibly be more important than the final output, as it would let the development team confront questions about the unknown aspects of the culture and its environment, and to use the game's simulational affordances to experiment and hypothesise:

*"[D]esigning a game that would do that is an intellectual activity that I would love to be one of the modalities of exploration for academic explorations of cultures. In other words, inviting students not just to do research into what happened, but try to figure out what happened that has disappeared, by making simulations and imagining what the verbs were, and imagining what the currencies were, and what the exchanges were. That interactivity of games is a unique aspect, and building a model allows you to explore that."* (Rolston interview, Q4)

Rolston also noted the dramatic and emotional potential of games, which may also be fulfilled by eschewing simulation and/or visual realism, for ambience and emotion. As examples, he pointed to *Never Alone*, and to Ian Cheng's *Emissary Trilogy* exhibition. The exhibition is a set of simulations where characters, animals and the environment interact with one another using predictive technologies to generate the interactions and their outcomes (Museum of Modern Art, 2017). Although a simulation, the visuals are non-realistic, drawing out an emotional reaction:

*"It feels very much like movement around a campfire by people, and the rules of interaction created by this artist are, I think, to generate what strikes me as an ambience very like what an aboriginal physical space might be, that if you were watching it, you would be struck by the drama, the non-verbal drama*

*from a distance, of interaction between people and objects, and fire, and dogs, and things like that.” (Rolston interview, Q4)*

Fredeen, Mochocki, Busbridge and de Freitas engaged in deeper conceptual speculation about the RPG. Busbridge highlighted the value a tool like *Virtual Songlines* would have in her organisation’s educational efforts. Fredeen and Mochocki both described worlds where the player and non-player characters engage in an intense relationship with the environment, highlighting the deep link between indigenous culture and the natural world in which given indigenous groups live. Both noted the importance of showcasing different roles within the community, and the dependency on community collaboration:

*“In essence, you would see how everyone had to work together in order for their village to thrive. Because if you made a mistake, you’d have a winter where you would run out of food[.]” (Fredeen interview, Q4)*

Mochocki also proposed to have the player and their character learn the world together by means of a long-haul narrative, where the player begins as a young boy or girl and then goes through several stages of progression towards adulthood.

De Freitas proposed a different take on the historical RPG. Merging the historical with the present-day, she proposed a project where players play themselves as time travellers visiting the past of a given location, with a narrative. This approach allowed a comparison between the past and present, perhaps using augmented reality to juxtapose the two. She also proposed a game set in the Dreamtime, allowing players to experience first-hand Aboriginal creation stories.

A historical RPG setting offers one set of challenges and focal points, while a present-day setting will address a different set. The next question examined the present-day setting, revealing differences and commonalities between the two.

#### 7.2.1.2 Interview question 5: How about an RPG that would be set in the present day of an indigenous community?

Three closely related themes dominated comments on a present-day indigenous RPG – adjustment and adaptation to modern technologies, the maintenance of traditional culture, and developing resilience in the face of social upheaval.

Fredeen noted native Alaskans traditionally followed resources such as animals, but today the resource they follow are jobs and education, taking them from small communities into large cities. A game should explore the challenge of adaptation, highlighting the skills needed to develop resilience, a point also noted by LaPensée.

Schell pointed to the adventure game, *We Are Chicago* (2017), which portrays a week in the life of Aaron, a black youth living in the gang-infested southside Chicago, as an example of a game about resilience. Squire, argued a present-day indigenous RPG could show the material reality many indigenous communities face. He also noted the interpretative difficulty of dealing with the present day where many subjective voices exist.

Respondent 1 concentrated on maintenance of culture. He said showing modern urban Aboriginal life would not be enough, discussing how traditional activities like hunting and fishing are still practiced by Aboriginal Australians, maintaining a connection to the land. Busbridge pointed to a more basic educational need:

*"[I]t's being able to show ourselves in a modern way, too, and the adaptations we've had over the history of this country since European settlement. Because, I think, you know, that there are people out there that think we were all just wiped out, and that nobody exists any more, or they only exist in just isolated or central areas of Australia. So even just showing them how we live in a modern way, and educating people on that[.]"* (Busbridge interview, Q5)

Mochocki conceptualised a game where the player moves between two locations, a traditional community and a modern city, effectively juxtaposing the two themes of maintenance and adaptation. Beyond scope of the thesis, he also considered the value of a LARP set in an indigenous village, noting both potential controversies around cultural appropriation and the benefits of inducing empathy. De Freitas, also connected to empathy, pointing back towards *Revolution* in which players role-played very different social roles, even as slaves, gaining insight for different social stations.

Flynn and Devine approached the question with a broader definition of the present day, looking at the recent past. Devine pointed at one of her current projects, which examines an Aboriginal community in north Sydney in the 1950s through the oral accounts of one of its members. Flynn discussed collecting oral accounts of the Maltese community and integrating them into virtual landscapes, *"landscapes that speak"* (Flynn interview, Q5). Later, Devine fleshed out her current project as casting the player in the role of the Aboriginal man who today is providing the oral account, and who at the time was a teenage member of the community in question. The game would be *"just someone being in the community and getting food for the day"* (Devine interview, Q6), varying with time and season:

*"So, it's looking closely at what time of year is it, what time of the tide, what kind of food can you get, what animals you can hunt, what fish, what birds, what eggs, what vegetation is available."* (Devine interview, Q6)

Devine also noted the value of filling a virtual world with multiple stories. An Aboriginal game would need to show different roles within the community. Rolston considered science fiction and fantasy scenarios. He noted commercial games co-opt cultures to build their settings, which need not be culturally exploitative.

Leavy was not interested in modern scenarios, re-iterating the value of a past setting where *“rules and regulations were in place, when myths and legends described the best social practice a person could engage with”* (Leavy interview, Q5).

The ways in which experts see heritage games impacting communities can reveal additional insight into how such games should be constructed and which cultural aspects are especially worth implementing. The next part of the interview addressed impact.

### 7.2.1.3 Interview question 6: What impact do you think it might have on an indigenous community to see an RPG game developed specifically around their cultural heritage?

The views on the impact an RPG game might have on an indigenous community were generally positive. Flynn described beneficial effects such as reigniting the community’s interest in its history, and capacity building, arguing the issue is now purely a practical question:

*“We know [games are] immersive, they’re engaging, that people laugh, cry, et cetera, they learn things. That’s been proven umpteen times. And we know we can apply this stuff to cultural heritage. The question is what sort of teams can you put together to make it happen.”* (Flynn interview, Q6)

Leavy reported presenting *Virtual Songlines* to Aboriginal audiences:

*“They do get moved, and as I’ve said, there’s been tears. People talking about paradise lost for instance, when we showcase Sydney Cove, or Warrane, as it was before first settlers arrived. And the same was said of the experience with the Botany Bay, or the Kamay project.”* (Leavy interview, Q6)

Fredeen, Busbridge, Respondent 1, and Squire discussed building pride in culture, and addressing the lack of popular culture content exploring indigenous culture and indigenous lives, both for indigenous people and the general community:

*“[A]ny time you can progress the understanding of an indigenous culture to a broader audience, it’s a good thing. So not only are you helping the youth or the players on an individual level, but you’re elevating that indigenous community to where there’s a greater understanding.”* (Fredeen interview, Q6)



Devine also acknowledges the “tremendous impact” (Devine interview, Q6) games would have, while concentrating on the preservative value of CH projects:

*"The community that I'm working with, there's only one or two people left [...] there's no place left, the people have scattered, and the person who we're talking to, [name withheld for privacy], who has the memory of it, he went there intermittently when he was around twelve to fifteen, and he is sixty now. So, most of the people whom he remembers are dead. This site and this community would be completely invisible to history apart from his oral recollections."* (Devine interview, Q6)

Devine's description of her project and her argument for implementing multiple stories and multiple activities for the player in a virtual world, match the strengths of open-world RPGs. LaPensée also pointed to RPGs, expressing interest in developing a game based on the *Fallout* series (1997-2015), a futuristic RPG produced by Bethesda Softworks alongside *TES*. She also cautiously noted indigenous-themed games will generate excitement, if they are approached through deep collaboration with indigenous communities.

Mochocki also commented on the benefits of RPGs, noting their immersion-building qualities translating into “...the power to awaken an interest, in a given culture, in a given community. Because it makes people immerse in a person that lives in the given culture” (Mochocki interview, Q6). He further explored this point in relation to his own live-action RPG efforts, where school kids play through historical scenarios together (Mochocki, *Edu-Larp as Revision of Subject-Matter Knowledge*, 2013). While his arguments are partially outside the scope of this research, his description of role-playing kids experiencing a sense of having tangibly encountered history is pertinent. Digital RPGs like *Skyrim* have the same capacity to convert historical experiences into personal experiences<sup>92</sup>.

De Freitas' view was more nuanced, noting the positive impact would depend on the extent to which the given community engages with digital games in the first place. Rolston said the development of a game like *Never Alone* must have been gratifying for the indigenous team members, “to have their stories listened to, and then shaped, and therefore valued by creating them into a game” (Rolston

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<sup>92</sup> The author recalls during a grade 7 discussion of the Serbian scientist Nikola Tesla, excitedly bursting out he had met him personally – through a computer RPG. The fact the encounter took place in 1895 while on a cannon-propelled rescue mission to Mars hardly needed to be mentioned. The impact of gameplay on this encounter was interesting: because Thomas Edison was also involved, the historic mutual dislike between the two inventors took concrete shape. From an insignificant footnote in history books, the rivalry emerged prominently whenever conversing with either man. The game in question was *Ultima Worlds of Adventure 2: Martian Dreams* (1991), a pastiche of late Victorian-era science-fiction novels.

interview, Q6). However, he also briefly noted potential concerns about co-optation that may lead to negative reactions.

Examining the demands of world-building also means highlighting the aspects of culture most important to include in an indigenous RPG. Such games will involve tangible culture, as the reconstruction of material objects in 3D is now relatively common-place (cf. Ch'ng, Gaffney and Chapman, 2013). However, intangible culture, the stuff of social and cultural interaction, remains problematic, a fact exacerbated by the centrality of intangible culture in indigenous heritage (Munjeri, 2009). The next section of the interview focussed the participants on intangible culture.

### 7.2.2 RQ3\_2: Intangible heritage (interview questions 7-8)

The second set of topical questions addressed two issues concerning intangible heritage; firstly, to identify priorities for inclusion, and then to consider best policies for situations where sacred or secret aspects of culture need to be addressed in the game world (Table 42).

	7: What aspects of intangible culture do you think are most important to depict in an indigenous RPG?	8: Assuming respectful approach, how should indigenous RPG approach sacred or secret culture?
<b>Respondent 1</b>	Cultural frameworks integrating everything	Some can be depicted without explicit knowledge; other aspects should be left out
<b>Lexene Busbridge</b>	All intertwined; relationships with people and nature	Consultations, elders would decide; some things may need to be left out or limited in access
<b>Michał Mochocki</b>	It depends, but songs important	If working with community, let them decide; otherwise, should be free to explore from own perspective
<b>Brett Leavy</b>	Stories, but integrated into context (land/people)	Stay clear, as there is no need
<b>Bernadette Flynn</b>	Depends on audience; something that resonates	Indigenous consultants would provide guidelines
<b>Kit Devine</b>	Any ICH known to be accurate; it depends on case	Use game mechanisms to restrict knowledge access
<b>Sara de Freitas</b>	(Q4 response) Stories, songs, songlines	Not asked; time constraints
<b>Elizabeth LaPensée</b>	Practices, ways of knowing, knowledge; re-playability	Follow protocol; can make game for non-publication
<b>Amy Fredeen</b>	Core cultural values	Three-pillar collaboration process at CITC; traditional permission and legal permission separately
<b>Ken Rolston</b>	Music, lyrics, dance; language	Community control and veto; sacred can also be depicted without explicit knowledge
<b>Jesse Schell</b>	Stories, relationships, values, methods and techniques	Be respectful; case-by-case basis
<b>Kurt Squire</b>	Don't know	Up to the community

Table 42 Expert response summaries (Q7-8)

#### 7.2.2.1 Interview question 7: What aspects of intangible culture do you think are most important to depict in an indigenous RPG?

Indigenous and non-indigenous respondents answered differently. Non-indigenous respondents were more cautious, and Squire declined respond, noting only for him the most important issue is whose voice is represented.

De Freitas did not directly answer this question due to time constraints, but her responses to earlier questions indicated for her the most intangible important elements were stories and songs. Stories and songs appeared repeatedly in the responses of other non-indigenous interviewees, including Flynn, Schell, Devine, Mochocki and Rolston. These responses varied, some focusing on stories as a carrier and explicator of cultural values, others on songs as a primary and complex form of ICH as combinations of words, music, and often also dance. Rolston also mentioned language as a determinant and indicator of social capacity for trade understood in the broad sense of any form of social exchange.

Non-indigenous interviewees, while often noting the details would depend on context, were relatively quick to point to specific and distinct components of culture. As an exception, Schell initially invoked stories, but then identified other, broader elements:

*“I think stories, probably, are important. And after that [...] social relationships. One of the things I think that defines any culture is the nature of the social relationships. So that seems very important. So once you go beyond stories and social relationships, then I guess you’re at values, I think that seems like something that’s very important. And also certainly methods and techniques, so how were things done. You know, household things, and work things, cooking and farming, distribution and all of those sorts of things. I guess I feel like if you hit those four, you’ve got most of it.”* (Schell interview, Q7)

Schell reached the deeper, inextricable strata of culture, such as social relations, values, and practices. Stories and other arts serve to *“shine a light on some aspects”* of culture, but ultimately *“a culture is people doing things in a certain way”* (Schell interview, Q7). A similar point was hinted at by Rolston, who justified the value of exploring language and more broadly communications as a way of examining how a culture handles conflict.

Schell’s response could effectively summarise all the comments from the indigenous respondents, who concentrated on relationships, values, and practices. Even when respondents did point towards particular expressions of culture, they were careful to contextualise this by explaining what deeper cultural aspect these forms express. Leavy mentioned cultural stories, especially Dreamtime stories, but explained how these convey the Aboriginal connection to country and ways to survive in country, and are geographically situated. *Virtual Songlines* tries to integrate stories with the land and the people. This work, Leavy also noted, can be situated within the principles and recommendations of the Australia ICOMOS Burra Charter (Australia ICOMOS, 1999).

Other indigenous respondents provided less specific, but equally deep responses. Fredeen saw intangible culture as identifying the core values of the culture and highlighting them through the game<sup>93</sup>, enabling both indigenous and non-indigenous players to bridge the gap with the showcased culture by encountering shared values. For LaPensée, it is *“our practices, our ways of knowing, our knowledge”* (LaPensée interview, Q7). She also noted *“games which can be revisited repeatedly and evoke new experiences”* reflect the indigenous experience, in the sense that stories in indigenous culture may contain multiple messages and lessons, so hearing the same story at different life stages may guide listeners in a different context every time. Busbridge indicated two cultural concepts she considers crucial, namely the reciprocal connection between people and nature, and analogously, the reciprocal connections between community members.

Respondent 1’s professional work concentrates on conveying Aboriginal intangible culture through cultural intelligence training seminars. For him the response to this question was an extrapolation of these methods to games. He proposed to explicate the *“traditional cultural frameworks that show you the integration of everything”* (Respondent 1 interview, Q7). When asked if this was more important than songs or ceremonies, he noted the connecting role these elements play: *“ceremony for us is what connects the tangible and the intangible”* (Respondent 1 interview, Q7). Ceremony without the underlying *“intangible principle”* is meaningless.

Secret and sacred aspects are a more specific issue of intangible heritage. The next question explored ways to approach this issue.

#### 7.2.2.2 Interview question 8: We have not yet discussed protocols, but assuming a respectful approach that recognises indigenous ownership and control over the entire process, how would you recommend an indigenous RPG should approach sacred and secret aspects of culture – if at all?

The experts generally agreed on the need to work within parameters set by the indigenous community through consultants and protocols. Fredeen outlined the three-pillar collaboration pattern for *Never Alone*: finding an Iñupiaq writer to work directly with the game developers; establishing a greenlight committee comprising in equal parts of Cook Inlet Tribal Council staff and E-Line Media developers; and including in the development process cultural ambassadors from the community. She also noted the development team’s willingness to engage deeply with the community, and the double effort for the securing of rights within traditional and western legal paradigms. Traditional ownership differs to the western concept of ownership, as it presumes the owner’s responsibility for transmitting the story.

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<sup>93</sup> *Never Alone* in its title expresses the emphasis the Iñupiat place on cooperation and its centrality to the survival of individual community members.

Flynn mentioned The National Trust of Australia's guidelines for working with Aboriginal CH (Hanson, 2012), which highlight the need to work with local knowledge holders, and to ensure a return benefit for the community.

Although Leavy works with local communities, he recommended not touching secret knowledge altogether, arguing respecting the secrecy generates greater understanding of indigenous communities. Busbridge also said encountering a clear indicator that knowledge has been omitted due to its secrecy would be an educational moment for many people.

LaPensée provided an example of a project built to depict secret knowledge within parameters set by the community:

*"In The Gift of Food, which is a board game, there came to be so much knowledge about traditional foods, that is protected by protocol, that ultimately it is being kept within the community itself. So, that was a game developed with the North-West Indian College, with coastal communities, and ultimately, I can't actually go around and show anyone else all of that game."*

(LaPensée interview, Q8)

In this case, secret knowledge was explored because the game was made exclusively for the community.

Respondent 1 and Rolston said secret knowledge can be shown without explanation, and thus without being compromised. As an example, Respondent 1 pointed out a visual symbol may be visible to all, but only those with the needed knowledge will understand its meaning. Rolston notes in the context of spiritual activity, *"the absence of explicit reference to it, is a perfectly normal way to observe it in a culture"* (Rolston interview, Q8), so the same mechanism can work in a game. Respondent 1 also said it could be good to illustrate secret knowledge through the analogy of a fantasy equivalent.

Devine stated games can be structured to only permit certain players to access some areas. Such structural restrictions were also a good option for Busbridge because it is sometimes done in the non-digital realm<sup>94</sup> (Stanner, 1979). Rolston described this scenario as *"crazy and very interesting"* (Rolston interview, Q8A), though not a large improvement given his view it is typical for spiritual activities to be witnessed by non-initiates without explicit reference or explanation. Nonetheless, Rolston pointed out *Skyrim* already had the faction mechanism which restricts information and services based on player relations with the faction.

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<sup>94</sup> Outside the indigenous realm, most religious monasteries are restricted to either male or female members, and do not permit visitors of the opposite sex into their inner confines. While it is not knowledge being restricted, the same principle of demanding respect for religious or cultural restrictions applies.

Mochocki agreed with the consensus on community consultations. However, he argued not all projects exploring indigenous culture should need to involve consultations. In his view, researchers or artists must also be able to freely present indigenous cultures through the lens of the western perspective.

Intangible heritage is not limited solely to human culture, but encompasses nature. The question of ICH priorities had already indicated the importance of the people-nature relationship. However, current commercial games remain relatively limited in dynamic depictions of nature. The next question investigated whether the current capacities of games were sufficient, and what improvements may be needed.

### 7.2.3 RQ3\_3: Natural heritage (interview question 9)

Given the importance of natural heritage within indigenous culture (Clarke, 2003), it was vital to investigate which aspects of nature were the most important to convey for the purposes of indigenous culture. Interviewees were asked first whether the environmental features of current games were sufficient for indigenous cultural purposes; if needed, they were then prompted to consider priorities for improvements (Table 43).

	9: Can <i>Skyrim</i> environmental features do justice to connection indigenous cultures have with environment? What aspects are most important to improve?
<b>Respondent 1</b>	Yes; improvements like seasons, stars, tides would be desirable, but not a necessity; cultural responses to nature can be shown in present form
<b>Lexene Busbridge</b>	Yes, especially with interpretation (voiceovers); changing environment especially seasons a desirable improvement to showcase cultural knowledge around nature
<b>Michał Mochocki</b>	It depends; better simulation is possible with more funding, but simulation is always simplification; seasons are a desirable improvement
<b>Brett Leavy</b>	Thorough research most important; accurate and authenticated information; improvements like seasons important, anything with connection to culture
<b>Bernadette Flynn</b>	No, limited to backdrop. Could be improved by adding sonic and tactile quantities.
<b>Kit Devine</b>	Yes, especially with additional tools like weather plug-ins
<b>Sara de Freitas</b>	Not asked; time constraints
<b>Elizabeth LaPensée</b>	Game needs to integrate greater storytelling capacity into nature; like books in <i>Skyrim</i>
<b>Amy Fredeen</b>	Yes, by highlighting the environmental resources and their connection to traditions and values
<b>Ken Rolston</b>	Too expensive to explore in high-fidelity games, more abstract approach allows more dynamics; improvements can expand existing game features, especially narrative and crafting
<b>Jesse Schell</b>	An abstract approach may be better; improvements should concentrate on areas most connected to culture
<b>Kurt Squire</b>	Yes, if this were the goal; improvements could include responsive world with connections between plants and animals

Table 43 Expert response summaries (Q9)

### 7.2.3.1 Interview question 9: Do you think the environmental features of *Skyrim* can do justice to the deep connection indigenous cultures typically have with their environment?

Most experts agreed the environmental features of current commercial games like *Skyrim* are sufficient, but can be improved. Fredeen, although relatively inexperienced with *Skyrim*, noted its capacity to “highlight the different resources, traditions, and values” (Fredeen interview, Q9) of indigenous people. For her, the key requirement was to convey a sense of connectedness between the people, the land, and the fauna and flora. LaPensée used the analogy of *Skyrim*’s diegetic books to argue everything in the environment should similarly tell stories and offer a similar depth of information.

Leavy discussed the need for research and environmental accuracy where community knowledge is collected and injected into the game. When considering the lack of environmental dynamism in *Skyrim*, Leavy argued this is a design decision rather than a technical challenge. Devine also noted the availability of tools needed to implement greater environmental dynamism. Squire agreed dynamic environment simulations could be achieved within existing technology. He discussed the addition of relational connections between different fauna and flora, so the player’s effect on one species of plant or animal might set off a reaction chain; however, he warned complex simulations could be problematic for their unpredictability.

Respondent 1 and Busbridge agreed *Skyrim*’s features are sufficient, if the environment is contextualised and connected to culture. Additionally, Respondent 1 said if environmental dynamics were introduced, the issue would be to properly convey indigenous responses to these dynamics. For Busbridge the importance of environmental dynamics was expressed in being able to showcase how indigenous knowledge of the environment allowed her people to predict and react to environmental events and seasonal changes.

Flynn said current game depictions of environments are not adequate because the landscape is simply “a filled-in backdrop” (Flynn interview, Q9) deprived of meaning. She pointed to sonic and tactile components as ways to increase complexity beyond the visual depiction.

Shell and Rolston pointed out approaches alternative to *Skyrim*. Rolston explained *Skyrim*’s environment is limited by the high production costs of an immersive first-person RPG game, but higher dynamism could be achieved in an abstract spreadsheet-style game such as *King of Dragon Pass* (1999). He discussed the possibilities of compensating the lack of tactile presence in games through the user interface. He noted some games use the UI to signal cold, while others visualise wetness and use it as a performance modified for the player, but such elements are not typically valued by players.

Asked about further improvements for *Skyrim*-like environments, Schell suggested concentrating on features central to indigenous activities. For Rolston, improvement meant better exploiting already existing features; this included crafting and stronger interplay between narrative and the environment so the dramatism of the story is “*affected by the rise and fall of comfort in the environment*” (Rolston interview, Q9). Crafting would focus players on resources, making them aware of the scarcities and dependencies of trade, and could be improved even as a mod for *Skyrim*<sup>95</sup>. Mochocki asked if a more complex environment was desirable given the financial cost, but highlighted seasons as a valuable improvement, echoing earlier comments from Busbridge.

Questions about the importance of heritage elements had already raised the issue of optimal cultural management mechanisms, or how developers should collaborate with communities. The next section of the interview addressed these questions in greater depth.

### 7.3 Cultural management mechanisms

The second set of topical questions investigated issues associated with the remaining two sub-questions of RQ3 (Table 44). These included recommendations for optimal collaboration with indigenous groups, particularly in the context of PAS engagement, and recommendations for deployment taking into account limited access to technology in indigenous communities.

	RQ 3 Component	Interview Questions
<b>Cultural management mechanisms</b>	Q3_4: In what ways would the protocol-based model of cultural management need to be adjusted to take into account the open nature of PAS engagement?	10-13
	Q3_5: What consideration needs to be given to limited technological access and digital literacy in some indigenous communities?	14

Table 44 The distribution of interview questions across RQ3 components (Q3\_4-5)

#### 7.3.1 RQ3\_4: Protocol and the PAS (interview questions 10-13)

Experts commented on the protocol published in Leavy (2014) to propose potential improvements. During the interview process, Leavy sent the author a revised, previously unpublished version of the protocol. The interviewees initially commented on the published version, but where relevant, the updated version was discussed<sup>96</sup>. Subsequent questions explored player co-creation, seeking to identify guidelines to maximise benefits and minimise harms of player co-creation (Table 45).

<sup>95</sup> It is beyond scope to analyse the content of existing *Skyrim* mods. But there are economic ‘overhaul’ mods, just as there are ‘survival’ mods that try to simulate the impact of elemental exposure on the player. In September 2017, an official *Survival Mode* was released for *Skyrim* through the Creation Club.

<sup>96</sup> Both protocols are included in Appendix B.



	<b>10: What are your initial thoughts about this protocol?</b>	<b>11: Can indigenous digital heritage projects be open to player participation in co-creation? 12: What additional limitations?</b>	<b>13: Share thoughts on conflict between scholarly views and community traditions of a given community's past.</b>
<b>Respondent 1</b>	Good protocol, consistent with traditional knowledge management	Dangerous with traditional knowledge, modding could distort transmission, undesirable	Conflicts will exist, also within community; protocols are there to aid conflict management
<b>Lexene Busbridge</b>	Good protocol; issues may exist around knowledge ownership as traditional rules not aligned with copyright laws	Modding and collaboration useful, not sure on implementation; educating players good way to reduce harm	Other views acknowledged and investigated, but for community project, community views prevail
<b>Michał Mochocki</b>	Protocol is good, but concern that traditional owners should not be able to block artistic or academic discourse	If historical accuracy, no modding; if heritage, modding is good; moderation and limited modding possible to reduce problems	Conflict to be expected also between age groups in community, also over revenue; resolution depends on nature of conflict
<b>Brett Leavy</b>	Old protocol duplicated itself in places, needed simplification; direct indigenous involvement in development too expensive	Yes, plans to do so at later stage as funding needed for control mechanisms; instructions and moderation desirable	Not asked; technical problems
<b>Bernadette Flynn</b>	Good starting point, but in practice would require an extensive legal agreement	Modding can be done, but probably not valuable except in co-created worlds; however, modding can energise players to explore history	Aboriginal scholars increasingly bridge gap between community and academia; in development, protocol will determine procedure
<b>Kit Devine</b>	Fantastic, no need for changes	Yes, but within limits; curated approach needed	Archaeological evidence often scarce, indigenous traditions can be more reliable sources
<b>Sara de Freitas</b>	Any kind of protocol is helpful for developer as structure	Not asked; time constraints	Not asked; time constraints
<b>Elizabeth LaPensée</b>	Protocol must be determined on case-by-case basis	Modding problematic as it puts non-indigenous players in indigenous experience without context	Not asked
<b>Amy Fredeen</b>	Protocol is appropriate and similar to CITC procedures; expanding consultations to target audience useful	Modding is good, but should be limited depending on community concerns; binding agreements and educating players desirable	Capacity to incorporate multiple views creates more potential for conflict; scholarly resources can be repurposed for community use
<b>Ken Rolston</b>	Protocol is great, except traditional owners should be like client, no need for direct development involvement	Possible, but should be determined by traditional owners; curation by developer or community needed	Conflict is natural, but not problematic; academic and creative work are different; client determines outcome
<b>Jesse Schell</b>	Reasonable, similar to working with large franchise; communications channels important to clarify in practice	Challenging due to playful nature of activity and potential for disrespect; need control of what people say/do	Not asked
<b>Kurt Squire</b>	Looks good, beyond expertise to change	Possible, depends on implementation; curated distribution could work	Something to be aware of, outcomes depend on who has editorial control

Table 45 Expert response summaries (Q10-13)

### 7.3.1.1 Interview question 10: What are your initial thoughts about this protocol?

The experts mostly agreed the protocol was appropriate. Devine, Squire, and Respondent 1 were satisfied with the protocol, and did not identify any flaws or improvements. Fredeen commented on the similarities between Leavy's protocol and the modus operandi on *Never Alone*. These processes differed in detail, but conformed to the same overall principles. However, Fredeen suggested expanding consultations beyond the community, to include the target audience.

LaPensée did not comment, only noting the case-by-case basis of indigenous collaboration. The remaining experts, including Leavy, provided more nuanced or cautionary responses. From an industry perspective, Schell found the protocol similar to commercial game projects involving intellectual properties (IP) like the *Star Wars* franchise, but noted even with commercial IP owners, project development *"can be disastrous"* (Schell interview, Q10) depending on how clear the rules are:

*"Because the worst is when you get some kind of approval, and then much later in the process, you have some vocal minority [that] suddenly appears, that either was absent before, or failed speak up before, or did not understand the situation before, and suddenly they tell you everything you're doing is unacceptable. And that happens all the time, and there are various practices that we use to eliminate that."* (Schell interview, Q10)

Schell pointed to the need for clear communication channels, where the developer only ever consults with one individual who represents the IP owner, and who is responsible for all internal consultations necessary to give the developer a clear, non-contradictory response. Schell also noted indigenous groups may lack the organised decision-making process emerging from experience in successful and long-running franchises.

Flynn noted further legal details would need to be established for any project; she also suggested the need for dispute negotiation frameworks, especially when the community is divided. Busbridge was generally positive, but warned the details of indigenous traditional ownership need to be closely examined, because they are not always fully in alignment with copyright law, echoing Fredeen (Fredeen interview, Q8) on the custodial nature of traditional knowledge ownership. Disputes could also involve financial issues around profit sharing.

Rolston, although enthusiastic about the protocol, found its final point problematic, where the protocol called for indigenous people to *"design and participate in the creation of the virtual Heritage application development at all stages of planning, design and production"* (Leavy, 2014, p. 114). He found it inappropriate to expect indigenous people to contribute to production as active experts in games

development. To Rolston, the community's role should be as IP owner and client, controlling and guiding development, but not necessarily involved in direct development, except where indigenous persons are on the paid development team.

Leavy had in fact removed the point of Rolston's concern from the updated protocol. He explained the protocol revisions were mainly about streamlining without changing meaning, but this particular change stemmed from practical experiences and financial issues. Community members would need to be remunerated for their involvement, and in the context of *Virtual Songlines*, the full research-to-production cycle would last about 40 weeks, with about \$1,000 per person per week having to be spent on this form of community engagement, raising costs beyond capacity.

Mochocki was satisfied with the incorporation of community voices and authority into the creation process, but warned such protocols, if applied over-extensively could stifle academic or artistic discourse. Mochocki was concerned about the point indicating knowledge provided by the community should not be modified without approval and endorsement from the traditional owners:

*"So this, in a way, blocks the possibilities of artistic and academic transformations of the stories. And much as I understand the fear of loss of culture, I don't think it should be put to this extreme. I mean, I think that culture should live in a multitude of artistic transformations[...] artists and academics who want to be critical of a given culture, who want to engage with the culture in a more creative manner should also be allowed to do so without the explicit consent of the traditional elders."* (Mochocki interview, Q10)

A similar point exists in the revised protocol. Mochocki argued strict adherence to this point could impose strict controls and prevent more critical examinations of indigenous culture. By contrast, opening a game to modification or co-creation by its audience raises the concern of relaxing the controls too much, facilitating the creation of objectionable content. This issue was explored in the next question.

#### 7.3.1.2 Interview question 11: Given the history of misappropriation of indigenous culture, do you think it is at all possible to open up indigenous digital heritage projects to any form of player participation in co-creation, including non-indigenous players?

Many interviewees found this question difficult or problematic. Most agreed it is possible to facilitate at least limited co-creation. One issue with modding was finding the correct framework to limit the users, or the financial capacity to develop the framework. Leavy was open to facilitating modding, but said developers must take appropriate precautions to offset risks. Fredeen also acknowledge the desirability

of modding, but “*there are certain aspects you don’t want them to mod*” (Fredeen interview, Q11). It would be optimal to limit modding in a way that compliments the culture involved. In this case, she suggested letting players modify the tools available to characters to highlight the history of indigenous innovation. Other mods would require the possibility of quickly removing undesirable.

For Schell, the fundamental issue was the playful nature of games, involving the pushing of boundaries and breaking of rules, which could be problematic in games involving special or sacred cultural elements. Rolston also agreed modding is possible, but its desirability was questionable and should be determined by the traditional owners. He noted ways to reduce the risks of modding such as curation, but said if misappropriation is a concern, the safest option is no modding.

Devine argued policing and curation are an important element of protection for sensitive topics. She also said new users are inherently unpredictable, as there is no way of knowing their pre-conceptions about the game’s topic. Squire agreed modding is feasible, but dependent on implementation.

Busbridge said collaboration with players would be helpful, but was uncertain about implementation.

Mochocki noted modding would depend on the project intentions, whether the project was for history or for CH understood as an application of the past for the purposes of the present. For history-oriented projects, mods should not be permitted to prevent ahistorical content. By contrast, if the purpose is heritage, then “*playful activities with heritage content*” (Mochocki interview, Q11) would be appropriate to encourage people to engage with culture.

Flynn, agreed modding would be potentially worthwhile if all issues could be resolved, but nevertheless said modding would not contribute meaningfully to CH, unless the work was itself a participatory learning tool with a high budget. For LaPensée a point of hesitation about RPGs in general was the way they cast non-indigenous players in the role indigenous people without having their life experiences. She acknowledged the ability to create empathy for indigenous experiences this way, but didn’t feel it was appropriate to do this. Creating a moddable indigenous RPG would be even more problematic from her perspective.

Respondent 1 warned any modding, even by the community itself, would allow knowledge distortion. Consequently, he argued if the purpose is to ensure knowledge is preserved in perpetuity, there should be no possibility of modification.

The next question explored what additional limitations on modding could minimise potential harm and maximise benefits.

### 7.3.1.3 Interview question 12: Are there any additional limitations or guidelines that you think could be used to allow player participation while ensuring it is beneficial rather than harmful?

The question of additional limitations was only asked of those interviewees who had not already covered this issue in the previous question. For Fredeen and Busbridge, it was important to educate players beforehand, to give players *“a sense of how they will be engaging with the indigenous community through the co-creation of the game”* (Fredeen interview, Q12). This could be done through YouTube videos, notices or video clips at the start of the game informing users about past problems faced by indigenous people.

Flynn became more excited about the educational potential of co-creation as she responded to this question. She emphasised the need for staff members who are experienced with running community workshops. As an analogy of both possibilities and requirements, she discussed the evolution of the modern museum from a place where the curator used to simply push knowledge to the visitor, to a place where the curator *“is sending out provocations to the visitor which will send them off on different pathways [...] the great thing about mods is that you can have this infolding as well”* (Flynn interview, Q12), where knowledge flows back towards the curator.

Leavy recommended moderated online spaces for the community to discuss and display mods or solicit feedback. Schell discussed *“controlling what people can say, and [...] controlling what people can do”* (Schell interview, Q12) in the community. Rolston considered two curation models, a self-curated, self-moderated community, or an externally-curated community, both used for *Skyrim*. Finally, Mochocki noted mods could potentially even be curated by a cultural expert at a local museum or organisation; additionally, modding could be restricted to some aspects of the game, such as avatar customisation.

Another area of possible clashes was between the community and heritage scholars. The next question asked the interviewees to consider such conflicts and how they might affect digital reconstructions of CH in RPGs.

### 7.3.1.4 Interview question 13: Optional question if previous questions did not raise this issue: I want to invite you to share your thoughts on conflict between scholarly views and community traditions of a given community's past.

The open question of conflicts between scholarly views and community traditions was less important for the research question, and was only asked in some interviews. Respondents agreed points of disagreement exist between scholarly perceptions of indigenous past and the perceptions of indigenous communities themselves. This was not seen as a major problem, given a protocol-guided development process.

Fredeen said the incorporating more community views into an RPG meant there are naturally more points of potential disagreement. She recalled the conflicted relationship between indigenous people and scholars who in the past recorded the life of her community. While, she had found these old videos to be condescending; the process of gathering such footage for *Never Alone* reminded her these videos are cultural assets the community can use.

Flynn noted the increasing prominence of Aboriginal scholars should alleviate conflicting interpretations of the past, as these scholars bridge the gap between community and academia. Flynn also said the developer must choose which knowledge sources and perspectives they will be using in their work, and this is likely to be determined by protocol. For Rolston, conflict is a natural element of the creative process, but a game developed under protocols would represent the community as IP owners.

Devine considered the possibility indigenous traditions may in any case be more reliable than relatively scarce archaeological evidence, to understand the picture of the community's past. However, as more distant past is examined, academic knowledge would become more significant, for example to understand the changes in climate that might have affected a community. Busbridge also stated a game addressing Aboriginal culture should privilege the views of the elders, although expert views need to be examined and accounted for. She also noted it is natural for academics to investigate points of disagreement, and in many cases, the scholarly community would ultimately come to accept indigenous views through verification.

Squire agreed such conflicts might exist, and the central issue was who would have overall editorial control of the project. He also suggested highlighting "*sites of contestation in the product*" (Squire interview, Q13).

For Respondent 1, internal disagreements over cultural management were a commonplace experience also within the community. Disagreements simply needed to be accounted for and managed, with protocols providing a good tool to ensure the community's views were well represented. Mochocki pointed to a wide range of possible conflicts fuelled by a variety of motivations, including generational disagreements between elders and youths, and possible financial disagreements over revenue sharing.

Generational differences are one reason why indigenous groups like the CITC, advocate using video games for CH to reach the younger generation. However, given the diverse, often difficult economic circumstances of indigenous communities, any sort of usage of games must be considered from the perspective of technological access.

### 7.3.2 RQ3\_5: Technological access (interview question 14)

The final section of the interview considered possible strategies for deployment of projects into communities. Experts were asked about their recommendations, and in some cases whether it is optimal to design games for maximum quality, or for maximum reach (Table 46).

	<b>14: Do you have any recommendations for how projects like this should be deployed into communities to maximise their potential?</b>
<b>Respondent 1</b>	Engage community in the process to ease project in; aim for accessible technology like mobiles and consoles
<b>Lexene Busbridge</b>	Work with government, especially education, to improve access; consult community; aim for both high-quality and maximum-availability versions
<b>Michał Mochocki</b>	Aim for both high-quality and maximum-availability versions; AI challenges may be circumvented with live interpreters
<b>Brett Leavy</b>	In Australia, technological access is non-issue; also, 90% of indigenous Australians in cities, not communities; flexibility in project delivery important, but if the project is good, people will find ways to access
<b>Bernadette Flynn</b>	Depends on community access and capacity; human factor also important for technological access
<b>Kit Devine</b>	Governmental support needed to deploy infrastructure; quality depends on community goals and resources
<b>Sara de Freitas</b>	(Q6 response) Depends on community usage of games
<b>Elizabeth LaPensée</b>	Use grants to maximise game affordability, plan for long-term engagement
<b>Amy Fredeen</b>	Non-profit organisations can help; integrating into school curriculum is useful; visual quality depends on project aim
<b>Ken Rolston</b>	Traditional owners should be consulted; non-digital game solutions should be very strongly considered
<b>Jesse Schell</b>	Technology requirements tailored to the project goals and audience
<b>Kurt Squire</b>	Community consultations needed, goals, budget and purpose together determine quality

Table 46 Expert response summaries (Q14)

#### 7.3.2.1 Interview question 14: Do you have any recommendations for how projects like this should be deployed into communities in order to maximise their potential?

Most experts agreed limited access to technology in indigenous communities is a challenge. Two common views were the importance of consulting with communities, and the need to engage with non-profit organisations or government bodies. However, Rolston, while noting the need for consultation with communities on issues such as target specifications, also said:

*“I am also strongly disposed against using digital products because they are so inaccessible in so many different ways. I hope there is a children’s book version of Never Alone available, because that would have wider access in the*

*community. And I also can even imagine a YouTube Let's Play as being a more accessible way to experience that.” (Rolston interview, Q14)*

Rolston was reiterating games as a medium should be used only when appropriate. The issue is not only technological, as gameplay itself may be a barrier to the story, so even online videos may be more accessible. Games should only be used when they are the appropriate medium and the target community is sufficiently familiar with them.

By contrast, Leavy said in Australia, the problem of technological access *“has been addressed, it's a non-issue”* (Leavy interview, Q14). He argued access to technology in remote communities has been substantially improved even if members of these communities do not always have the disposable income to buy technology. Leavy noted regardless of the situation within remote communities, 90% of Australia's indigenous population lives in cities. To Leavy, working to preserve the memory of the Aboriginal connection to country in urbanised sites, the urban Aboriginal population is key. Ultimately, while noting the value in flexible delivery formats and multiplatform support, Leavy argued, *“if the content is there, if it is done right, First Nations people will find a way to access it”* (Leavy interview, Q14).

Fredeen explained the strategies the CITC employed to improve access to *Never Alone* in Alaska. A curriculum built around *Never Alone's* cultural insight video segments was distributed for school use throughout Alaska; the use of videos also alleviated the problem of challenging gameplay. The CITC as an organisation with broader social goals also runs an after-school programme, providing children on-site access to the game. Fredeen hoped in the future *“non-profits that serve youth look at these [games] as assets. [...] I'd like to see agencies that work with youth really embrace these as a way to connect youth to games”* (Fredeen interview, Q14). For the question of maximising quality or access, Fredeen said this would depend on the game and the motives behind it.

Flynn recommended looking to the communities to assess what technology is available, including public facilities such as museums or libraries. She highlighted the need to consider the human factor. A community may theoretically have access to technology through a public facility, but in practice access is *“blocked because there's a particular person [...], who is very unwelcoming to new people”* (Flynn interview, Q14). Solutions are case-by-case: *“[w]hat you can probably say is there won't be a one-size-fits-all, and there probably won't even be ten-sizes-fits-all”* (Flynn interview, Q14).

Thinking primarily about remote communities, Devine stated a large-scale government effort would be needed to roll out the necessary infrastructure. Busbridge suggested working within existing school education structures. She also noted the need for consultations, and said ideally both a maximum



quality and a maximum access version would be pursued for different purposes. For her, however, maximum access through lower quality visuals would be the priority option.

LaPensée pointed out affordability and a need for awareness that working with indigenous communities demands a long-term commitment. One aspect of this long-term commitment was capacity building, providing workshops and other means for indigenous community members to engage directly with the development process and gain game development skills (e.g. Lameman & Lewis, 2011). Developers should seek out grants and other funding opportunities for engagement with communities. LaPensée also discussed post-release support:

*“And the greatest emphasis here is that when creating games with and for indigenous communities, understanding that this is a life-long journey, this doesn’t just happen with... you jump into a community, make a game, and then say, “ok, I’m out now, bye”. You are always responsible for continuing to iterate that game and ensure that it is always the best possible that it can be, as well as continuing to expand out access. You know, this isn’t something you just get some money, and you make it, and you drop it, and you go and you don’t continue communication”* (LaPensée interview, Q14).

Developing games for indigenous audiences is a longer-term project requiring more attention and support than a typical game. Such commitment was also evident for Respondent 1, who noted the need to engage with the community to allow its members to familiarise themselves with the project and its outcomes. This approach would be ultimately rewarding:

*“Because our people are a people that were governed by Law, and story, once something is locked in, once the story is locked in, it’s locked in. So, I think, yeah, if you include the community in the process, and they engage in that process, then that will be potentially, you know, flow on into development, technological education, all that kind of thing”* (Respondent 1 interview, Q14).

Schell, Squire, and Mochocki discussed the issue of technological parameters for a game. Rather than recommending one option over another, the interviewees explained their respective benefits. For Squire, the choice of high-end and low-end targets or a compromise position, would be determined out of the combination of various factors including project goals, budget, and purpose. To Schell, the question was primarily of the audience; if the target audience is to only be the community, the game must be optimised for the community’s technological level. When aiming for a broader audience, or influential figures like potential donors, a high-fidelity approach would be preferable. Mochocki also

recommended both approaches be pursued for different purposes. He also noted many games offer built-in options to reduce visual fidelity to support lower-end computers.

Mochocki also discussed a point beyond scope of this thesis, namely the possibility of developing multiplayer environments populated by living historical interpreters akin to those present at non-virtual heritage sites.

## **7.4 Analysis**

This section brings the reported expert interview responses together, invoking literature as needed, to respond to RQ3 in its five sub-questions. The sub-questions are preceded by an analysis of the initial primer responses providing background for the interviews.

### **7.4.1 Primer responses**

The primer questions were asked in three versions depending on the expert being interviewed. Heritage experts indicated they had little prior contact with VH, confirming such methods can only compliment, not supplant, traditional heritage methods. The VH experts affirmed their conviction in the value of interactivity while also noting funding constraints limit their capacity to fully explore technologies. Finally, game experts broadly agreed RPGs are well-suited for exploration of culture, but typical commercial RPGs are too combat-centric.

#### **7.4.1.1 Traditional heritage experts**

Traditional heritage experts had little experience with VH and games. They were generally satisfied with their methods, and it was clear VH was only one of many ways traditional heritage methods could be improved. Although beyond the scope here, Mochocki's live-action RPG projects could be an inspiration for practitioners looking for additional ways to communicate social experiences in heritage.

VH and video games were of interest to traditional CH experts, but could only be considered if adequate funding was available. These findings are in line with the literature; digital methods are embraced when available (Christie & Verran, 2013), but are not seen as important. Aboriginal elders who stress the need for more cultural engagement in their communities also do not mention digital methods (People Culture Environment, 2014).

#### **7.4.1.2 Virtual heritage experts**

Primer feedback from VH experts corroborates the literature on the inherent immersive qualities of video games and virtual game-like projects, and on the value of interactivity. Notably, in Flynn's project, players would report being able to smell the depicted temple, and feel the presence of other beings, despite the project providing no such functionality. This can be likened to Wolf's (2012) world-building

gestalt process where an immersed audience mentally fills in the gaps about the imaginary world. However, Flynn's *Maltese Temple* was a VR environment designed to explore embodiment, and offered more sensory immersion than a typical game.

Funding is a key challenge, imposing tight restrictions on VH projects. Even for Fredeen's *Never Alone* funding was not a problem because the project was designed for a small budget (Cook Inlet Tribal Council, 2017). Funding also constrains distribution, as in the case of Flynn's *Maltese Temple*. Games, while less immersive than powerful VR environments, are easier and cheaper to distribute, if not to develop. As de Freitas noted, it is common for serious game projects to fail to achieve their full potential, and most do not make it into the market.

It is likely due to the funding constraints VH developers, while aware of notable video games touching on heritage, do not look to commercial titles as inspiration. However, there is also an awareness of the inherent difference of commercial games, the fact they are oriented towards an optimal gameplay and narrative experience, and may misrepresent CH to further this goal. Leavy was an exception, examining a wide range of games to draw inspiration for the gameplay and photorealism of *Virtual Songlines*. However, implementation of such inspirations is again constrained by funds.

Some of the experts, including LaPensée and Squire, straddled the gap between VH and games, showing the interconnections between the two areas. The games experts were the next to be examined.

#### 7.4.1.3 Game experts

The game experts mostly agreed RPGs are appropriate for the exploration of culture. Notably, the most cautious voice was veteran RPG designer Rolston. RPGs were reported as strong in immersing players in both place and society, encouraging an exploration of both. While subjectivity carries certain risks, in the context of exploring social and cultural differences, it allows a more holistically representation of a society's world view by stylising the game towards such a perspective, as a form of procedural rhetoric (Bogost, 2007a).

Rolston noted the value of the modding tools, potentially allowing developers to use *Skyrim* as an experimental platform for CH games. His comments align well with other arguments for the use of modding tools in VH (e.g. Francis, 2011; Champion, 2012b) and collaboration with games modders (Majewski, 2017a). *Skyrim* provides a powerful and flexible set of tools, and potentially the assistance of its modding community. *Skyrim* and its predecessors, *Morrowind* and *Oblivion* have been used for CH mods (e.g. Flarup, 2009; Fassbender, 2012; Goins, Egert, Phelps, Reedy, & Kincaid, 2013). However, the legal limitations imposed by the end user license agreement of *Skyrim's Creation Kit* are notable. By this agreement, users are not permitted to commercialise their products in any fashion, and Bethesda

Softworks gains the unlimited right to exploit user-produced in any way, without any control from the user:

*“If You distribute or otherwise make available New Materials, You automatically grant to Bethesda Softworks the irrevocable, perpetual, royalty free, sublicensable right and license under all applicable copyrights and intellectual property rights laws to use, reproduce, modify, adapt, perform, display, distribute and otherwise exploit and/or dispose of the New Materials [...] in any way Bethesda Softworks, or its respective designee(s), sees fit. You [...] agree never to assert against Bethesda Softworks or its affiliates, distributors or licensors any moral rights or similar rights [...].” (Bethesda Softworks, 2012)*

Given the implicit complete loss of control, it is unlikely any indigenous group would wish to publish cultural materials created for *Skyrim*. The license agreement is not enforceable for undistributed mods, but any public usage would require, as a pre-requisite, a separate license agreement between the mod developer and Bethesda to let the developer retain full legal control of the cultural content.

Experts also discussed the RPG tendency for simple object-collection and monster-killing quests, echoing the literature (e.g. Crogan, 2011; Hayse, 2014). Schell and Rolston both noted such mechanics are the default solution to the RPG’s need for a repetitive inner challenge loop. Players must be able to progress with their characters, and combat provides an effective way of providing a challenge and rewarding progress. The limited range of mechanics, Squire notes, also relates to the limits of the medium, with games unable to offer the degree of interactivity their increasingly detailed visuals seem to promise.

Rolston’s caution about RPGs requires further thought; as the lead designer on *Morrowind* and *Oblivion*, and an enthusiastic player of *Skyrim* (K. Rolston, personal communication, October 14, 2017), he could be expected to make a strong case for open-world RPGs as spaces for culture. However, analysis of his responses in the primer section and in the discussion of subsequent questions, indicates Rolston’s warnings concern primarily any attempt to create a commercial-style RPG for heritage. Justifiably, Rolston appeared to believe directly imitating an RPG like *Skyrim* would make it difficult to achieve cultural or financial success, with the two goals compromising one another; a large budget, if even possible, would force the developer to maximise sales revenue, which would push the game towards typical commercial, combat-driven RPG gameplay. Rolston did, however, see *Skyrim* as a good platform for culture, if it is done as a non-commercial mod. He endorsed the cultural possibilities afforded by *Skyrim*, while highlighting the risks of commercialisation.

Additionally, conventional RPGs, including *Skyrim*, have in recent years evolved to partially address the concerns around gameplay. As Squire said, open-world games have been pushing the boundaries of interactivity, expanding the player's range of verbs. Chapters 3 and Chapter 5 document this process in *TES*. Although the new affordances are auxiliary in their nature, serving to assist the player's combat abilities, they demonstrate some potential innovations vis-à-vis the limitations identified by Schell, Rolston and LaPensée, and a trend towards future developments.

Examining existing digital heritage projects, Schell and LaPensée pointed to a selection of unique experiences, each tailored towards a specific client and gameplay form, and each far from typical commercial games. Flynn's *Maltese Temple* could also be added as another unique structure. Existing heritage projects are specialist constructs. Schell's comments suggested specialisation is not always demanded by client requirements, but may result from a limited budget. The commercial game *Never Alone* was also narrowly specialised for budgetary reasons (Cook Inlet Tribal Council, 2017).

#### 7.4.2 World-building and heritage

Responses in this section explored world-building strategies in situations where cultural loss has occurred, as well as priorities for intangible indigenous culture, and whether current natural environments in RPGs are sufficient to convey indigenous natural heritage. Experts introduced a range of proposals for games set the past, seeing this as more desirable than depicting heritage by showing present-day indigenous communities. Most respondents, especially indigenous ones, saw the deep values behind culture as more important than any one form of intangible heritage like songs or stories. Finally, experts agreed the natural environment features in *Skyrim* are adequate, but can be improved.

##### 7.4.2.1 Q3\_1: What strategies could world-building employ in situations where substantial cultural loss has occurred?

Expert consensus on the requirements of an indigenous-themed RPG centred around the phrase "*it depends*." Indigeneity implies only a similar set of circumstances, not any cultural commonalities (United Nations Department of Economic and Social Affairs, 2009), so different cultural groups will have different needs. This variation extends to individual communities. One reason is the need to engage into deep cooperation with the community, to heed the voices of its elders, and to understand the problem as closely as possible, a point highlighted by LaPensée. Differences will exist even within a single community. Respondent 1 and Busbridge came from related communities, both work to promote traditional Aboriginal culture using non-digital methods, but their respective organisations employ different approaches.

Leavy did not see variable requirements as a challenge for his *Virtual Songlines* project, even though close collaboration with communities regularly exposes him to such differences. *Virtual Songlines* is designed as a catch-all framework usable to explore cultural sites from any indigenous Australian community. The various *Virtual Songlines* projects focus on the relationship between the local community and their country, and on the preservation of recorded data about culturally significant sites. Each project is location-specific in detail, but general in its adherence to the broader framework. However, Leavy's framework may not fulfil all the requirements presented by others. *Virtual Songlines* appears to concentrate on the visualisation of the landscape, its fauna, flora, and on the positioning of its Aboriginal inhabitants within this setting. Its presentation of social relations and activities is limited, so it is unclear how adaptable the framework would be for the social aspects of differing communities. The privileged position of landscape reconstruction within *Virtual Songlines* seems to emerge from Leavy's stated focus on depicting the historical presence of Aboriginal groups on sites subsequently subsumed by urban development; such reconstructions may be inadequate for communities still inhabiting their traditional lands. Virtual landscapes may not always be as important as social relations and customs.

A set of common requirements applying more generally to depictions of historical indigenous cultures did emerge from the interviews, especially from Fredeen and Mochocki's responses. Such an RPG should depict the relationship between people and environment. It ought to show social relations within the community. It ought to show different individuals within the community have different roles, even to the point of shutting off certain avenues of action for a player, depending on the role being played, as in the case of men's business and women's business. The RPG would highlight the mechanics of Aboriginal culture (e.g. Clarke, 2003; Flood, 2006; Watson & Chambers, 1989), which evidently have parallels in other indigenous cultures.

Limiting the player's freedom of action stands in opposition to commercial RPG trends. For example, *TES* has evolved to give players a maximally open range of actions. Where *Morrowind* and *Oblivion* required the player to follow one character class/profession orienting the player towards specific skills and behaviours, *Skyrim* eschewed classes in favour of open progression (Majewski, 2017b). Nonetheless, a new game could impose restrictions on players. Such restrictions could serve not only the cultural role of presenting different roles within indigenous groups, but also would distinguish the game from commercial RPGs. Given the importance of choice as a gameplay mechanic (Schell, 2015), specialised character roles limiting player freedom based on past choices, could arguably highlight agency and produce better gameplay.

These proposals are compatible with the *Virtual Songlines* framework. Busbridge referred to this project explicitly, noting how valuable such a tool would be for her guided cultural tours. The presented visions were game-oriented, and incorporate a stronger gameplay element than *Virtual Songlines* worlds currently do, albeit not stronger than what Leavy states as his objective. For gameplay, Fredeen and Mochocki both suggested an element of danger, as the player's participation in activities ensuring the community's survival presuppose the possibility of failure. Danger was also implicitly present in de Freitas' vision of a time-travel experience where the player travels into the past.

Mochocki proposed to cast the player as a child or adolescent character, allowing the player to learn about the culture together with their character. This would circumvent a common, if relatively trivial, problems of RPG games, where player characters should be reasonably well-versed in the world around them, yet must appear to be ignorant or even amnesiac (Whitlock, 2012) because players need leeway to ask questions. Casting the player as a young character who does not know much about their world is an appropriate solution alongside more common amnesiac or 'fish out of water' scenarios. De Freitas' scenario resolves the same challenge by casting players as themselves, travelling into the past through time, excusing their ignorance of the historical community. This proposal also facilitates the contrasting of the present and the past, with the player being able to visit the same location in the past as they see in the non-virtual world of the present. The same effect, however, is accomplished by other means in the *Virtual Songlines* reconstructions (Leavy, 2014) and elsewhere.

De Freitas also mentioned the possibility of a game set in the Dreamtime. Such a setting may narrow the cultural possibilities by limiting depictions of day-to-day activities, but it would also enable players to vividly experience the intangible heritage of Aboriginal creation stories. The Dreamtime was mentioned by Squire as a topic his team once had considered for a serious game (Squire interview, Q3). Aboriginal Dreamtime stories have been used in three small projects, the student project *Songlines* (Vick, 2012), and the iPhone-based digital storybooks *Warlu Song*<sup>97</sup> (Matheson, 2015) and *Ngurrara*<sup>98</sup>. The Dreamtime draws attention from both serious and entertainment-oriented artists and developers<sup>99</sup>. However, none of these projects had any significant funding behind them, and mythology-based projects may be a difficult 'sell' for competitive research and development grants.

The VH scholars noted historical RPGs may have difficulty with cultural accuracy, as the further back into the past a game reaches, the more it will rely on conjecture. Flynn proposed employing a non-

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<sup>97</sup> <http://yijalayala.bighart.org/digital-stories/warlu-song/>

<sup>98</sup> <http://yijalayala.bighart.org/digital-stories/ngurrara/>

<sup>99</sup> Aboriginal stories, both of the Dreamtime and beyond, have always been present among books Aboriginal culture. Prominent scholars like Catherine Berndt (1981) have published collections of Aboriginal stories for children. Films, e.g. Peter Weir's *The Last Wave* (1977) have also circumspectly touched Dreamtime ideas.

naturalistic aesthetic to prevent realistic imagery from invoking assumptions of accuracy. Squire suggested highlighting the authorial voice, making it clear the player is seeing someone's personal and possibly inaccurate interpretation.

Concerns about inaccuracies in heritage games need to be confronted with present heritage theory, which questions the importance of accuracy (Holtorf, 2013). If heritage is subservient to the needs of its owners (Smith, 2006; Holtorf, 2011), inaccuracy in a historical RPG is an issue for scholars, but possibly not the community whose past the game explores. Should cultural loss be permanent, or can lost heritage be replaced with partially-conjectural virtual reconstructions? Accuracy was naturally a concern for VH scholars, but other participants concentrated on collaboration with indigenous communities within the purview of what community elders prioritise. Community constraints are not analogous to maintaining strict historical accuracy, but instead to cultural accuracy and appropriateness, which is not the same. To the Aboriginal participants in the film *Ten Canoes*, alignment with their present culture, not historical accuracy, was the requirement (De Heer, 2006b). For instance, they insisted the segments of the film set in the time frame of Donald Thomson's ethnographic photographs which inspired the film, should be filmed in black and white. The intention was not accuracy, but reflection of the way the community's memories of 'Thomson Time,' preserved in these photographs, were black and white (de Heer, 2006b; Tudball & Lewis, 2006)<sup>100</sup>.

Rolston proposed to develop a historical game not for its own sake, but for the sake of the research conducted via the creation of a simulated environment, and its use to pose and test cultural hypotheses. VH would meld with experimental archaeological reconstruction (Stróżyk, 2010; Giddings, 2015) as a form of exploring history (de Groot, 2016). The risk is, as Flynn noted, vividly presented speculations leading the audience to believe they are seeing proven facts rather than conjecture (Giddings, 2015). However, from the perspective of an indigenous group seeking to revitalise their culture, maintaining strict accuracy is likely to be less important than the ability to convey a complete, coherent, and emotionally powerful vision of their culture. Emotional power is an advantage in game-based reconstructions noted by Rolston, and more broadly by game education literature (e.g. Gee, 2006; Squire, 2011). The indigenous experts were enthusiastic about VH, even if they had not pursued it. Most expert recommendations for the past fit into the categories of setting (Table 47) and player role (Table 48). Recommendations are not mutually exclusive, categories overlap.

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<sup>100</sup> However, the choice of black and white footage could be appropriate to maintain the accuracy of historical reconstruction. The absence of colour photographs meant colour would be conjectural for any dyed objects in the images. Maintaining black and white tonality would avoid conjecture. However, this was not the intention here, as the rest of the film, chronologically set in a distant past before 'Thomson Time' was in colour.



Setting	Description	Benefits	Challenges
<b>Maximum accuracy (Leavy)</b>	Recreated landscape striving for historical accuracy, possibly photorealistic (e.g. <i>Virtual Songlines</i> )	Game functions as virtual world-based database, with cultural elements embedded into game world	Emphasis on accuracy means project will either contain holes in cultural content where unknown, or will potentially conceal speculative nature of content; mythology as cultural heritage may be difficult to fit in
<b>Day in the life (Busbridge, Leavy, Devine)</b>	Setting oriented to social activities, although can still function on a landscape aiming for accuracy (e.g. <i>Virtual Songlines</i> )	Social activities are highlighted; environment detail only necessary to the extent required by game affordances; foregrounds day-to-day activities	Less capacity for meaningful narrative as day-to-day activities are foregrounded; explicitly conveying cultural values may be challenging
<b>Simulation as research (Rolston)</b>	Game built around simulation of environmental/cultural aspects; the process of development as important as outcome	Process of creating simulation fits within the purview of experimental archaeology, allows scholarly inference to hypothesise on gaps in cultural record	More constrained by scholarly rigour, possibly less directly useful for community, as probably lesser emphasis on cultural values
<b>Stylised or abstract game (Flynn, Rolston, Schell, Squire)</b>	Setting consciously shifts away from naturalism to highlight its subjective, authored aspect and to fit within cultural worldview (e.g. <i>Never Alone</i> , arguably <i>Ten Canoes</i> )	Less controversial when speculating on missing aspects of heritage; less likely to confuse audiences on accuracy  The more abstraction, the more freedom of implementing game world and tailoring it to cultural worldview	Visual stylisation limits capacity for photorealism and visual accuracy; reconstructive aspect de-emphasised in favour of playful heritage aspect
<b>Semi-fantastic (de Freitas; Squire)</b>	Setting based on Dreamtime or similar (e.g. <i>Never Alone</i> ; <i>Songlines</i> )	Greater freedom to engage with deeply meaningful narratives to convey cultural values; setting explores mythology as CH	Potentially de-emphasises non-mythological aspects of CH

Table 47 Expert recommendations regarding settings for indigenous RPG in past

Flynn also mentioned the benefits of co-creating the game in a massively-multiplayer context. The construction of the world would itself be a gameplay aspect. This recommendation, however, reaches beyond the scope of the current research. Suggestions to rely on a mobile augmented reality application if the budget development is small must also be set aside for the same reason.

Player role	Description	Benefits	Challenges
<b>Unconstrained adult (default)</b>	Default RPG role. Player is a generic, often player-defined, character and can undertake any activity they want (e.g. <i>World of Temasek</i> )	Players freely explore setting, making full use of the possibilities afforded by the open-world RPG genre	Divorces traditions and roles from player affordances
<b>Constrained adult (Respondent 1, Busbridge)</b>	Player plays specific adult member of the community; constrained to the activities appropriate to the role (e.g. <i>Revolution</i> )	Setting experienced in context of traditional social constraints; constraints distinguish game from commercial productions  If multiple roles available for players, each role affords different socially constrained experiences	Contrary to tendencies in commercial RPGs; limits range of activities available to players
<b>Child (Mochocki, Leavy)</b>	Player is a child, gaining knowledge of the community and its customs in the same way an indigenous child would (e.g. <i>Ohana</i> )	Knowledge learning is a natural process imitating life; rites of passage add important cultural element	Players must go through child-like activities before experiencing adult roles  Some sort of time compression needed for growth to adulthood unless focussed on shorter timeframe
<b>Time traveller (de Freitas)</b>	Player is foreign to the community, as a time traveller	Exploration from ignorant outsider position justifies asking obvious questions about culture; player can identify more directly with character as alter ego	Time travel could distract as science-fiction element

Table 48 Expert recommendations regarding player role for indigenous RPG in past

For present-day RPGs, three themes explored change: adjustment and adaptation to modern technologies, maintenance of traditional culture, and developing resilience in the face of social upheaval. Indigenous lives have changed extensively and irrevocably through interdependence with non-indigenous society, as the indigenous participants made clear. Change continues at social and individual levels, when families or individuals follow “*the employment resource*” (Fredeen interview, Q5) from isolated communities into cities. In the process, traditional support networks are lost, while traditional activities like hunting or fishing are abandoned in favour of non-traditional employment. This latter change was important to Mochocki, who recommended facilitating movement between a traditional community and a modern city to contrast the two. For Busbridge, meanwhile, it was important to simply show Aboriginal people are still present in society, and adapted to modern life.

Consistent with the emphasis on tradition among Aboriginal elders (e.g. People Culture Environment, 2014), Respondent 1 argued merely showing how indigenous people live in modern society is not enough, the continuity in traditional culture must be shown. Traditional lifestyles were also central for

Devine, who described her current project depicting the recent past of an Aboriginal community in north Sydney through the prism of daily food-gathering activities and how these activities were determined by the seasons and tides. Devine and Flynn also noted the value of oral histories, preferably multiple stories in a modern or recent past scenario.

Squire considered the value of enabling non-indigenous people to experience the difficulties of daily life in modern indigenous communities. Schell invoked the adventure game *We Are Chicago* (2017) as an example of how a minority community's difficulties can be depicted in a video game. Such proposals leverage video game capacity to build empathy by enabling the player to experience someone else's role (Gee, 2006). However, Mochocki expressed concern if he were to create a LARP game enabling non-indigenous children to role-play indigenous people, it could be considered inappropriate regardless of benefit. Many Aboriginal people object to so-called 'blackface' impersonations of Aboriginal people by white Australians (e.g. Quinn, 2016). Live role-playing does not need to involve change of appearance or use of make-up, but in another question, LaPensée also expressed some disapproval for non-indigenous players role-playing indigenous characters (LaPensée interview, Q12). It is not clear whether this view is common in indigenous communities, and *Never Alone* exemplifies indigenous openness to such role-playing. Serious games do cast players in potentially controversial roles. De Freitas described *Revolution*, where players would play black slaves and white slave-owners, experiencing radically different social stations. *We Are Chicago* is also designed to allow all players to embody a (non-indigenous) black teenager. Ultimately, indigenous depictions in games generate controversy not because of the possibility of players embodying indigenous characters, but because of the stereotyping commonly occurring (LaPensée, 2011).

Overall, present-day indigenous RPGs generated less interest from experts, with Leavy openly expressing a preference for a past setting. The resulting set of expert recommendations is consequently less detailed (Table 49).

Participants were asked about the impact a heritage game could have on the indigenous society it depicts. This question was not expected to uncover any previously unreported benefits or problems; as Flynn noted, the efficacy of games and their impact has been proven many times. However, the expected benefits helped to better explain the priorities for content.

Experts noted indigenous games provide more space in popular culture for depictions of indigenous culture and indigenous lives. They build empathetic connections between indigenous peoples and the broad non-indigenous public, and embolden indigenous individuals by showing traditional indigenous

culture in a positive light. In the latter case, continuity of traditional culture is more important than the present day, as in *Ten Canoes* or *Never Alone*.

Strategy	Description	Benefits	Challenges
<b>Maintenance of tradition (Respondent 1, Devine)</b>	Emphasis on traditional activities even when done using modern means;	Appropriate for depictions of recent past; highlights the core cultural elements of the indigenous experience instead of the modern trappings	Focus on maintenance of traditions potentially de-emphasises problems of cultural loss and adjustment challenges in cities
<b>Between worlds (Busbridge; Mochocki; Fredeen)</b>	Movement between traditional community and modern setting	Showcases the balancing of two worlds in modern indigenous experience; explores challenges and adjustment strategies, modernity and tradition	Multiple settings and activity ranges are more work-intensive
<b>Resilience and empathy (de Freitas, LaPensée, Schell, Squire)</b>	Game concentrating on building empathy, e.g. by conveying the day-to-day challenges of an indigenous person in a modern setting	Focusing on modern life and challenges foregrounds resilience-building and may inspire empathy	Focus on modern challenges potentially de-emphasises CH in favour of empathy
<b>Talking landscape (Flynn)</b>	Interactive soundscape, where recorded community narratives integrated into “ <i>landscapes that speak</i> ” (Flynn interview, Q5)	Brings together and preserves stories from community, integrated into landscape; foregrounds living memory and emotional connections	May de-emphasise cultural practices in favour of accounts
<b>Science-fiction integration (Rolston)</b>	Elements of indigenous culture integrated into science-fiction setting	Potential for commercial success	May be seen as culturally exploitative; limited in CH value

Table 49 Expert recommendations on strategy for indigenous RPG in present

Devine stressed the impact of cultural preservation through VH projects. She said the memories of the community she is striving to reconstruct virtually in her current project, exist almost exclusively in oral accounts. The community is almost invisible to history, as its archaeological and ethnographic footprint is non-existent, and this is likely a common scenario of cultural loss. It is valuable to depict mundane everyday activities, and, if available, personal accounts and stories.

For Leavy, commemoration or indeed the restoration of memory, of historically Aboriginal sites swept away by urban development is the focus and the purpose of most *Virtual Songlines* projects. In this sense, while Leavy’s work concentrates on evidence-based environmental reconstructions, its ultimate purpose is in the realm of the intangible: awareness of what had been, memory of a “*paradise lost*” (Leavy interview, Q6).

This emerging significance of intangible heritage as a concern was anticipated. Intangible heritage was explored in additional interview questions, analysed in the next section.

#### 7.4.2.2 Q3\_2: What aspects of intangible indigenous cultural heritage are most important to disseminate?

What are the priorities for the representation of indigenous intangible heritage? This question revealed a similarity in indigenous expert views regardless of their cultural group. Non-indigenous interviewees concentrated on autonomous elements of culture such as stories, songs, or language, but indigenous interviewees were united in stressing the impossibility to isolate such elements from their cultural context. The concepts raised included values, relationships both with people and land, frameworks, practices and ways of knowing, and finally, the knowledge of a given community. The details differed between indigenous groups, yet there was a unity in diversity revolving around the impossibility of conveying culture in a meaningful way through isolated stories or songs. An analogy could be made to a tapestry with images weaved into it; the non-indigenous experts pointed towards particular images as important, while the indigenous concentrated on the whole tapestry and on its background, without which those images would be devoid of meaning.

Individual products of cultural such as stories or songs, while precious as heritage, do not necessarily confer knowledge about the culture as a whole. Projects like Leavy's *Virtual Songlines* do concentrate on the encyclopedia-like preservation of as many cultural elements as possible, but for others, like *Never Alone*, the game's story was secondary to the broader message conveyed by the game.

The focus on concepts like values, relationships, and practices confirms the value of using an RPG to communicate culture. While such elements are not a given in any game, they can be meaningfully explored in an open-world scenario where players learn through induction, trying different behaviours and observing social or environmental reactions. As Gee (2006) argues, games are well-suited to explore complex systems through trial, error, and experimentation.

Indigenous cultures have many sacred or secret elements. Different approaches for these elements were presented by the experts, though all depended on consultation with the indigenous community. All agreed games developed for communities must respect the boundaries set by these communities, omitting elements a community wishes to keep secret. Leavy, whose *Virtual Songlines* project is the longest-running game-based project for indigenous culture, generally preferred to omit secret knowledge.

Two possibilities of conveying secret and sacred knowledge other than omission were explored: creating a fantasy equivalent illustrating secret knowledge only through analogy, and creating a limited-access game. In the latter case, access would be limited either to a part of the game's content, to the whole game as was the case for one of LaPensée's games. A fantasy derivative was unexciting to most respondents, who did not see it as advancing heritage understanding. Limited access, however, while

attractive and interesting to the respondents, is also the riskier option in terms of security of knowledge. Players commonly hack games to unlock hidden content (Newman, 2008), so limiting distribution of the whole game would be the only safe option.

Not sharing secret knowledge was not seen as affecting the cohesion of the overall depiction of culture. An indigenous RPG could omit secret cultural elements like *Virtual Songlines* or *Never Alone*, yet provide a meaningful experience of the cultural core of values and relationships. The author anticipated secret knowledge to be challenge, because its depiction is problematic, but its omission seems to leave a hole in the depiction of the whole. None of the experts saw this as a problem, and the Aboriginal experts all had experience educating about Aboriginal culture without delving into secret knowledge. Respondent 1 and Rolston also suggested it is typical to experience the outward signs of secret or sacred rituals without any secret knowledge being divulged. In *Ten Canoes*, the audience witnesses a sacred funeral ritual being performed without understanding the ritual or gaining the knowledge to imitate it.

Indigenous cultures share a cultural affinity with the environment; their survival strategies place a premium on interdependence and group cohesion, maintaining an environmental status quo, and capacity to correctly react to environmental change. The next section interrogates the capacity of modern RPGs to convey the indigenous environmental connection.

**7.4.2.3 Q3\_3: What aspects of indigenous natural heritage are most important to disseminate?** General consensus exists the environmental features of *Skyrim* are sufficient to convey the connection between indigenous cultures and their environment. Only Flynn disagreed, criticising game environments as little more than a “filled-in backdrop” (Flynn interview, Q9). As a researcher exploring embodiment in virtual environments (Flynn, 2012), Flynn emphasises sensory immersion, and her subsequent comments (Flynn interview, Q9) intimated she found games too limited to the visual field, neglecting other senses. She suggested virtual environments could be improved by stronger incorporations of sonic and tactile aspects. While tactile feedback remains underused in games, Chapter 5 notes *Skyrim* has a substantial sonic layer in its landscape, which Flynn may have been unaware of. Flynn’s proposals for enhanced tactile feedback are noteworthy for projects seeking deep sensory immersion, particularly where a project would exist as a static installation like Flynn’s *Mnajdra Temple*. However, most VH projects would base their immersion standards on current commercial games (e.g. Leavy interview, Q3B), and this is likely why other respondents were more positive about game environments.

The experts proposed several developments for environments. LaPensée and Leavy proposed to integrate more information into the environment. LaPensée’s idea of environmental objects to be ‘read’

for cultural knowledge like books in *Skyrim*, is a natural extension of existing RPG information systems. The adventure game *Firewatch* (2016) provides a case where many elements of the environment are triggers for the player to obtain information discussing them with another character.

Squire, Mochocki and Busbridge considered adding dynamic elements to the environment, including chains of relationships between animals and plants, and seasonal changes. Busbridge, and to a lesser extent Respondent 1, saw seasonal changes as important to the indigenous experience. Traditional indigenous lifestyles were seasonal (e.g. Moway, 1976; Clarke, 2003; Keen, 2004).

The feasibility of dynamic environments would depend on the level of dynamism and funding. Rolston explained the difficulty of reconciling seasonal changes with high production values, where seasons multiply the asset requirements and technological challenges needed to achieve immersion. Meanwhile, dependency chains between animals and plants suggested by Squire are probably absent not only due to technical issues, but also gameplay concerns. Bartle (2004) describes how *Ultima Online* (1997) initially featured a functional ecosystem, which had to be replaced by a static environment because players would overwhelm the system<sup>101</sup>.

Rolston also proposed to improve use of features already available in games like *Skyrim*, namely narrative and crafting. The narrative can make an otherwise static environment appear more dynamic; on a smaller scale, this is seen in *Never Alone*, where the game begins with an acknowledgement the weather is not behaving normally. The rest of the game does not need to show any major changes to the weather to convey the sense of change, as the narrative has indicated change does occur. Narrative-induced changes to the environment are also visible in *Firewatch* and *Morrowind*, providing an illusion of greater dynamism. Similarly, crafting is a feature already established in *Skyrim*, as described in Chapter 5. The relationship between indigenous people and their environment could easily be highlighted by expanding the range of crafted items and perhaps adding multiple stages to the crafting process.

Schell and Rolston also suggested more abstract approaches to the depiction of the environment could allow for greater dynamism and environmental depth at the cost of immersion. This research explores the applicability of games like *Skyrim* for heritage, and *Skyrim* is relatively photorealistic. However, even a change in visual style towards reduced photorealism would potentially allow more leeway by simplifying the visual layer of the game. For example, *Firewatch* uses stylised visuals convey a powerful

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<sup>101</sup> The achievability of such a system in a 1997 game does not mean it is equally technologically feasible today, as growth in game complexity complicates such matters. Similarly, the earliest *TES* games did have seasonal changes in their environments, but these were no longer implemented from *Morrowind* onwards (Rolston interview, Q9).

experience on a much smaller production budget than a photorealistic game would require. The reduced costs open possibilities of greater dynamism in the environment.

The examination of natural heritage requirements concluded the exploration of the world-building requirements for indigenous-oriented RPGs. The next step was to consider appropriate mechanisms for collaborative development.

### 7.4.3 Cultural management mechanisms

Responses in this section explored issues around protocol-based collaboration with indigenous communities, PAS engagement, and product deployment strategies. In both cases, no universal solution could be identified, as every community and project would likely require unique approaches. However, Leavy's protocols (Appendix B) were found to provide an effective starting point for collaboration.

#### 7.4.3.1 Q3\_4: In what ways would the protocol-based model of cultural management need to be adjusted to take into account the open nature of PAS engagement?

Experts explored three collaborative relationships: developer-community, developer/community-players, and developer/community-academia. The least problematic relationship is between developers and the traditional community. This may seem paradoxical given the chequered history between indigenous communities and CH experts (Zimmerman, 2007). However, past conflicts have spurred efforts to develop cultural protocols for streamlined relations.

Experts discussed Leavy's (2014) protocols for VH, and minor criticisms were raised. The game industry professionals Schell and Rolston, both expressed willingness to work within the constraints of the protocol. They noted this protocol was like the limitations imposed by large franchise-owners on commercial products. The current protocol could be applied for heritage projects without difficulties. Additionally, the revised version of the protocol supplied by Leavy (Appendix B) addressed some of expert reservations and responded to practical experiences from the *Virtual Songlines* project, and it seems recommendable to follow the revised version.

Many of the experts highlighted the need for more specific guidelines for collaboration. Flynn indicated the principles set out in the protocol were not directly applicable, without first being turned into a full-scale legal document. LaPensée also said each situation will require separate protocols. Experts provided suggestions to streamline collaboration, most of which centred around the need for a detailed communications framework. A point of contention existed between Fredeen's recounting of measures employed on *Never Alone* and Schell's recommendations based on experiences with large franchises. Where the former called for wide consultations and extensive direct contact between development team members and community members in a committee, the latter argued the need for one point of



contact on the community side to ensure internal disagreements do not lead to conflicting instructions. The disagreement between these views may be superficial, as broad consultation frameworks do not preclude strict decision-making procedures. What is clear is, while every case will be different, indigenous communities can still look to one another and to commercial IP owners for ideas on optimal CH intellectual property management.

Mochocki was concerned strict adherence to the protocol could curtail critical academic or artistic examinations of indigenous culture. He may have been under the impression this protocol would be proposed at national level as legally binding to anyone exploring indigenous culture, or he may have been concerned the mere existence of a protocol would create pressure to conform. Nonetheless, Schell and Rolston's commercial IP analogy suggests these concerns are likely unfounded: a developer seeking to make a *Star Wars* game must maintain the good will of the IP owner and conform to their requirements, but academics or artists seeking to critically examine *Star Wars*, could do so in various ways without having to conform to the rules set out by the IP owner. Leavy's protocol could assist those working with indigenous communities, but would not affect anyone who wishes to examine an indigenous culture independently.

Most experts agreed it is desirable or at least possible to facilitate modding in some form, bringing the players into the relationship, within appropriate limits. Three main methods of controlling modding emerged. The player community could be moderated and the output of modding could be curated through sites of distribution like the Steam Workshop. Moddability could also be limited to a narrow range of elements, providing some creative opportunities while limiting capacity for damaging works. Finally, Busbridge and Fredeen highlighted the value of reaching out to players and establishing good will by explaining the issues at stake. A PAS community, once imbued with a particular spirit, will tend to perpetuate this spirit (Gee, 2013; Squire, 2011), so establishing understanding with players at the outset, could potentially be more important than any technologically-imposed constraints. All three solutions are already used in commercial games, particularly online virtual worlds, where community management has a long practical history (Bartle, 2004).

Modding is not always appropriate. For LaPensée, even simply allowing non-indigenous players to play the role of an indigenous character was already problematic in some ways, and presumably the ability to modify the game would deepen her misgivings. Respondent 1 and Mochocki also warned modding could introduce ahistorical content into the game's historical setting. However, Mochocki notes this would only be an issue for projects seeking to accurately depict historical settings as opposed to seeking to foster player engagement with CH based on a historical setting. There is also evidence some players

modify games with the explicit goal of enhancing their historical content in an accurate way (Majewski, 2017a), so a well-managed community might enhance, rather than detract from, historical accuracy.

No clear views emerged on how conflicts between scholarly and indigenous traditions of the past may affect game development. Most experts agreed such conflicts need to be considered, as do disagreements within the indigenous community itself. Such conflicts, whether internal or external, were seen as commonplace. Experts argued in any case projects developed for indigenous communities should ultimately serve their clients first, conforming more to indigenous traditions than scholarly views where disagreement exists. However, game as interactive structures, potentially allow for speculative exploration of history and historical theories from multiple perspectives (Champion, 2006; Majewski, in press). Rolston had argued in response to an earlier question, games could contribute to academic debate by shedding light on the past through experimental testing of scenarios.

Once protocols had been considered, there remained the issue of technological access and how access problems might affect the distribution of an indigenous-oriented RPG. The final interview question addressed this issue.

#### 7.4.3.2 Q3\_5: What consideration needs to be given to limited technological access and digital literacy in some indigenous communities?

Many indigenous communities will have difficulty accessing modern digital games. The challenges include digital literacy, hardware availability, and internet connectivity, with the latter determining access to digital distribution. While Leavy argued access to technology has greatly improved in Australian Aboriginal remote communities, most experts indicated some problems remain, both in Australia and elsewhere. Fredeen said some Alaskan communities could not download *Never Alone*.

Rolston emphatically argued against using digital games simply because they are 'sexy'. This project examines the benefits of using RPGs for indigenous culture, but this goal must not obscure the fact there will be many situations where media other than games are more appropriate. When the CITC staff sought to incorporate *Never Alone* into Alaskan schools, they did so by showing the non-interactive cultural insights videos from the game, rather than through gameplay. Yet, Leavy's point remains – if indigenous people see good games being made about their culture, many will find ways to access them, perhaps even accelerating digital literacy.

Experts recommended building relations with government and NGOs. Relationships between developers and communities should be structured for long-term, ongoing investment (LaPensée interview, Q14). Respondent 1 suggested if the community is properly engaged in the process, allowing them to grow accustomed to the technology involved, the community will ultimately willingly adopt the technology for

their own purposes. LaPensée also highlighted the value of organising workshops and other means of transferring game development skills into indigenous communities (e.g. Lameman & Lewis, 2011).

Access issues can be alleviated by targeting more commonly available technologies such as mobile phones or game consoles. While mobile games require different guidelines beyond the scope of this research, *Skyrim* itself is available on multiple consoles, making them appropriate tools. However, consoles do reduce modding opportunities. Some console games enable using game mods on consoles, but these mods are developed on computers. In the author's experience, developing a mod or a game requires a more powerful computer than needed to play the end product. Considering this, a good way promoting indigenous modding may be through school-centric or university education projects (e.g. Kardan, 2006; Anderson, 2007; Lameman & Lewis, 2011). Unfortunately, such projects remain uncommon and short-lived, a challenge in need of further exploration.

## 7.5 Conclusion

The experts interviewed in this study responded to 14 questions covering five areas: world-building strategies, intangible heritage priorities, natural heritage priorities, cultural management and collaboration, and finally, issues of technological access. The subsequent sections summarise the responses for each of the five RQ3 sub-questions.

### 7.5.1 Q3\_1: What strategies could world-building employ in situations where substantial cultural loss has occurred?

The combined expert voices demonstrate there is no one valid strategy to undertake in re-constructing heritage, as different reconstructions will differ in goals. No one approach is inherently optimal. Beyond the scope of this thesis, non-digital live-action RPGs were also indicated as a potential heritage platform. The scenarios potentially useable to depict indigenous heritage are also diverse; however, most respondents saw re-creations of the past prior to cultural loss as a more valuable scenario than a modern era game limited to extant cultural elements. The latter scenario could be used to foster empathy and understanding for indigenous people among non-indigenous players. If a modern setting were used for heritage, experts stressed the game should still focus on traditional activities.

### 7.5.2 Q3\_2: What aspects of intangible indigenous cultural heritage are most important to disseminate?

The most important intangible aspect to be conveyed are not individual elements such as songs and stories, or even broader concepts like rituals and practices, but the deep cultural values expressed through those cultural elements. Especially indigenous interviewees gravitated towards this response. Stories, rituals and specific practices are important as outward signs of the values and relationships at

the cultural core. The responses also indicated everyday practices would be more important for conveying values and relationships than songs or stories.

### 7.5.3 Q3\_3: What aspects of indigenous natural heritage are most important to disseminate?

At the core of indigenous natural heritage is the reciprocal connection between the land and the people. Respondents mostly indicated the current depictions of nature in RPGs like *Skyrim* are adequate for this purpose, despite being largely static. Respondents suggested a greater depth of information is desirable to make the environment more informative and more narrative. If additional dynamic elements were incorporated, they could be seasonal changes in the landscape, dependency chains between plants, animals and people, and greater interaction with nature via the use of natural resources (e.g. crafting). These elements were not proposed for their own sake, however, but as means to illustrate indigenous connections with nature.

### 7.5.4 Q3\_4: In what ways would the protocol-based model of cultural management need to be adjusted to take into account the open nature of PAS engagement?

Leavy's protocols provide a strong starting point for collaboration between developers and communities. The CITC model of collaboration for *Never Alone* shared many similarities with Leavy's protocols. However, the protocols and their implementations need to be considered at the local level. No universal solution could be identified for effective incorporation of PAS engagement. Different communities would need individualised approaches to the extent of PAS interactions, if any. Existing community management solutions from the commercial game world were considered adequate to manage PAS engagement.

### 7.5.5 Q3\_5: What consideration needs to be given to limited technological access and digital literacy in some indigenous communities?

Although the product may drive usage and acquisition of digital literacy skills if it is sufficiently strong, deployment should ideally be targeted at the technologies most widely available in each community. Additional assistance may be needed, and support from governmental or NGOs should be sought out. Non-interactive and non-digital solutions should also be considered, as they will still be preferable in many cases.

### 7.5.6 Study limitations

The study interviewed 12 of 24 contacted experts. The 50% interview response rate indicates the results are probably biased towards a positive view of VH, as traditional heritage experts may have chosen not to respond because they were uninterested in the topic. Disengagement of experts from large museum bodies was notable. It would be worthwhile to establish why these experts were disinterested.

However, findings indicate indigenous virtual heritage is best considered from a local perspective, so the absence of experts from large institutions may not be a problem overall.

The author found the game scholar and developer voices very diverse, and saturation was probably not reached in this area. Both Rolston and Schell stood out as offering unique insights. Interviews with additional game designers with RPG experience could contribute further insights.

### 7.5.7 Initial recommendations

*“[T]here won’t be a one-size-fits-all, and there probably won’t even be ten-sizes-fits-all”* (Flynn interview, Q14) – this phrase, originally expressed in the narrow context of technological access, succinctly summarises the overall expert feedback. The situation of different indigenous groups and communities, as well as their needs, are far too diverse to develop any unified set of recommendations.

This result may seem obvious. However, globalisation has empowered marginalised indigenous cultures to reach out and communicate with one another across the globe. Scholarly work on modern-day indigenous issues is often global in subject and reach, with books compiling indigenous situations and views from around the world to identify commonalities (cf. Burger, 1990; Wilson & Stewart, 2008; United Nations Department of Economic and Social Affairs, 2009). Given these tendencies, it is important to be reminded indigenous culture is always local culture, local challenges, and local solutions. More overarching depictions of indigenous culture, for example to depict Indigenous Australian cultures in one product, would require distillation into an abstract, fictionalised entity showcasing cultural commonalities while obscuring differences. Indigenous Australians inhabit different environments, requiring different lifestyle (Keen, 2004). Today they also differ in present circumstances, with more, or less of their traditional culture still available. As Devine noted, there is a gulf of difference between the Yolngu in the Northern Territory with a relatively intact culture, and the Aboriginal peoples of south-eastern Australia, whose culture has been swamped through colonisation.

Still, commonalities exist in indigenous values. These commonalities allow *Virtual Songlines* projects to depict sites from all across Australia within one framework. It is perhaps a greater stretch to imagine the CITC of Alaska using *Virtual Songlines* as the framework for a Native Alaskan RPG. Such a game would require a completely different environment. Yet, the basic focus on the connection between people and environment means enough commonalities exist for such a project to be feasible. Similarly, if Rolston’s suggestion to leverage *Skyrim* modding for prototyping was followed, *Skyrim* could accommodate various indigenous cultures to some extent. Any modifications enhancing the game for this purpose, whether through deeper environmental connections, greater depth of environmental information, or

more sophisticated crafting and communication systems, would be equally valuable for any indigenous-themed project regardless of the community in question.

The expert interviews were the last of three research studies in this thesis. The final step in this research project was to synthesise all the findings from all three studies into a set of recommendations for future indigenous-oriented RPG projects. This synthesis is presented in the next chapter.

# Chapter 8: Synthesis

## 8 Synthesis

The previous three chapters summarised the results from three separate studies. Chapter 5 presented a qualitative analysis of the world-building methods in *Skyrim*. Chapter 6 presented a quantitative survey of the active modding and encyclopaedist communities gathered around *Skyrim* in passionate affinity spaces. Finally, Chapter 7 presented a series of qualitative in-depth expert interviews to identify core game and project design features to support dissemination of indigenous CH in RPG games. The immediate contribution Chapters 5 and 6 made to game studies and game audience studies respectively was clear; without the completion of Chapter 7, however, their implications for heritage could only be outlined. The present chapter therefore brings together the findings of the three studies together into a single synthetic whole. The three research questions explored previously now give way to one overarching question: how can open-world RPGs like *Skyrim* contribute to the transmission of Aboriginal CH? However, any response to this question must be preceded by a note of caution: RPGs will in many cases be the wrong tool for the job.

### 8.1 The case against digital RPGs in indigenous heritage

The difficulties with digital, commercial RPGs as a source of inspiration for heritage could be summarised as follows: they are digital, they are commercial, and they are RPGs. Each of these three aspects was highlighted by some of the experts in Chapter 7, either directly, or through implication. The traditional heritage experts discussed various non-digital heritage options. Digital methods were not an important consideration for them, either because they were simply not the best way of reaching the audience, as also noted by game developer Rolston, or because of the costs of development. The latter problem flows into the second challenge: commercial games are not good inspiration for VH, because they are made with far larger budgets justified by the game's ultimate ability to generate a profit, and the whole game is oriented towards that purpose. This in turn flows into the challenge of RPGs being RPGs: games. The analysis of *Skyrim*'s world-building toolbox conducted in Chapter 5 may have obscured that, while the bulk of the author's autoethnographic research journal is spent discussing the ways *Skyrim*'s world comes together, a significant part of the author's gameplay time was spent dungeon-crawling or fighting dragons (Journal, Sessions 2, 6, 9, 11). Looting tombs, killing bandits, skeevers, and undead warriors is exciting, but hardly good heritage practice. Especially looting tombs, a remarkably common activity in *Skyrim* (Shephard, 2013).

Against this background, the cautionary words from Rolston, Schell, and LaPensée, as well as the literature (e.g. Crogan, 2011; Hayse, 2014), together make a significant point: *Skyrim* and other RPGs, still ultimately revolve around combat. Even though the player may spend most of the time outside of



combat, talking to NPCs in towns or exploring the wilderness, these activities are still related to combat: they involve the search for new quest opportunities, the conversion of loot from past quests into equipment for future quests, and so on. There is a real danger of succumbing to ‘the Indiana “Jones dilemma”’ (Champion, 2015, p. 108), where the desire to make heritage ‘sexy’ (Rolston interview, Q2C) is realised at a cost to the integrity of the heritage in question.

To use RPGs as a baseline for CH exploration is synonymous with a re-invention of the genre into a tool more appropriate for this purpose. As Leavy’s experiences with *Virtual Songlines* demonstrate, this is a challenge, and not feasible under all, perhaps even under most circumstances. In many cases, other tools will be preferable, whether they be guided tours, non-interactive media such as books and films, or the non-digital RPGs used by Mochocki (2012). Nonetheless, where it is feasible to develop a digital RPG for indigenous heritage, the findings confirm *Skyrim* is an excellent baseline.

## 8.2 *Skyrim* as a benchmark for indigenous heritage

One of the most interesting disparities in views between the experts interviewed in Chapter 7 had been the almost clear-cut division between indigenous and non-indigenous experts on the aspects of CH needed to convey indigenous cultures. While different indigenous groups, both from around the world, and within the narrower Australian context, are greatly varied in the deep details of their culture, all the indigenous interviewees agreed their cultures need to be depicted holistically rather than through smaller elements like stories or songs. The indigenous experts pointed to values, relationships, frameworks, practices, and ways of knowing. Equally, no specific aspect of the environment was emphasised, but the connections between nature and culture, between the people and their environment. The experts echoed the literature characterisations of indigenous heritage (Munjeri, 2009; Zaman, 2013), and specifically Aboriginal knowledge and practices identified by Christie (2008), Yunkaporta and McGinty (2009), and past anthropological research (e.g. Stanner, 1979).

The analysis of *Skyrim* conducted in Chapter 5 indicates the game’s strength as a world-building mechanism is precisely the kind of holistic approach favoured by indigenous cultures. While virtual worlds vary in the actual depth of environmental, social and cultural wordliness they achieve, typically falling short of target (Champion, 2015), as worlds they are predisposed to be holistic. The requirements for virtual worlds, even if not fully matched in their present implementations like *Skyrim*, could be argued to be among the most sophisticated and demanding of all the possible adaptations of imaginary worlds as theorised by Wolf (2012). In practice, the experience of *Skyrim* is a direct, even virtually tangible, interaction with an imaginary world (Schut, 2007; 2016). The player must immerse in the environment and society as a participant observer (DeWalt & DeWalt, 2011), directly experiencing the

world on a local and performative level. In immersing the player this way into its world, *Skyrim* matches not only the educational practices recommended by Gee (2003; 2006), but also the experience of traditional Aboriginal society, where culture was encountered not by research, but in a local, very practical experience (Christie, 2008). This form of knowledge transmission is good for storing data about Aboriginal culture by ensuring the context of any aspect of culture or society remains embedded in its appropriate context (Leavy, 2014). The performative process of encountering the world is also effective in bringing to the surface the deeper values and relationships within a society the experts in Chapter 7 indicated as crucial to understanding indigenous cultures. In *Skyrim*, the player must negotiate networks of NPCs, interviewing multiple characters to become aware of all the different points of view on a given topic, and in extreme cases, to understand the topic at all even from a single perspective.

*Skyrim*'s world-building features described in Chapter 5 would conflict with at least some of present approaches to indigenous heritage. One such feature is *Skyrim*'s impressionist landscape, which compresses a large area into a small landscape. Such impressionism is useful to ensure the virtual world is sufficiently diverse and attractive while remaining manageably small for development. In the context of indigenous heritage, impressionist scaling down of the world would have the benefit of allowing stronger illustration of the often-significant travel ranges of indigenous peoples. For example, the area inhabited by the Kombumerri people whose heritage is presented by Busbridge, encompassed a part of the Gold Coast (O'Connor, 1997) comparable to the surface area covered in *Skyrim*. However, Aboriginal groups also maintained long-distance social and trade connections (Keen, 2004). The Kombumerri regularly travelled beyond their own borders in social contacts with other nearby groups (O'Connor, 1997). Virtual travel would not be viable if it involved the player literally walking for several days of real time. A similar problem can be seen in Cook Inlet Tribal Council's *Never Alone*, which in fact does use a sort of impressionism or even surrealism in its landscape; if the game were to convey the heroine's travels in a realist manner, it would be tedious. There are clear benefits to an impressionist approach embraced by *Skyrim*, to *designing* the landscape for gameplay purposes, enhancing and driving exploration. Nonetheless, an impressionist world would be problematic any time the exact shape of the land itself is a part of the heritage message being conveyed. Impressionism would clash with at least some aspects of Leavy's *Virtual Songlines* projects, where one of the core features is a faithful re-creation of real landscapes in their real dimensions.

The study of *Skyrim* showed the game's environment was largely static, concerned more with creating an illusion of nature than with simulation. In Chapter 7, the experts were asked about this problem, and whether the static nature of the environment in *Skyrim* was sufficient for indigenous heritage with its extremely deep connection to the landscape and seasonal changes (e.g. O'Connor, 1997; Clarke, 2003,

Keen, 2004). Many experts had ideas for improvements, noting seasonal changes in the environment would be a significant addition. However, most, including the indigenous experts, agreed the present level of depiction of the environment is adequate, with Respondent 1 highlighting the importance of communicating the overall nature of the relationship between people and environment, which does not require seasonal details to be displayed. Rolston also noted some elements of *Skyrim*, like crafting, could be better used in their present forms to enhance the relationship between people and land (Rolston interview, Q9).

There is a case for *Skyrim* as a benchmark for indigenous heritage in general, and Aboriginal heritage especially. It was possible to observe a degree of overlap between the knowledge management characteristics of virtual worlds such as *Skyrim* and those of Aboriginal cultures. However, it does not seem viable to engage in direct imitation of the kind sometimes attempted in earlier heritage projects, such as Kardan's (2006) attempt to transpose the logics of *World of Warcraft* for the purposes of Hawaiian culture. As Flynn notes, there is no one-size-fits-all solution for indigenous heritage (Flynn interview, Q14); every application will be as different as the culture it represents, and the unique locality it is set in. *Skyrim*, in any case, is still far from being a fully convincing virtual world, so many of its features would be simply inadequate, while combat is overemphasised. Nonetheless, the synthesis of the *Skyrim* analysis with the expert interviews and the literature indicates the game offers a set of useful tools and tactics, which can be used to enhance CH projects.

Beyond the game, the next part of the thesis dealt with the active audience. Chapter 6 summarised a survey of the *Skyrim* community, showing significant engagement with the game, and through the game, with the world. There is a case for the benefits of encouraging active audience participation in a CH project. However, while most experts were at least cautiously optimistic about audience involvement, there were also some notable misgivings. A cautionary case against PAS participation must therefore be presented.

### 8.3 The case against PAS participation in indigenous heritage

Indigenous groups are sensitive to the way their culture is depicted in popular media, with both their relative invisibility, and their stereotypical appearances being points of concern (Leavitt, Covarrubias, Perez, & Fryberg, 2015). For the Aboriginal Australians, the literature review has shown their presence in games is effectively non-existent, while also noting the controversy around *Survival Island 3: Australia*, due to the hostile depiction of Aboriginal Australians and the lack of contact between the developer and the Aboriginal community (Johnston, 2016). Among the interviewed experts, LaPensée even suggested allowing non-indigenous players to play indigenous characters in a game will already be controversial in

some quarters (LaPensée interview, Q11). Such controversies can be expected to be even more significant for player modding, where PAS participants are given a considerable, sometimes unlimited, degree of freedom to modify the game.

The experts expressed their concerns around PAS participation primarily around two areas: inappropriate content, and ahistorical mods detracting from the heritage project's educational value. The survey of *Skyrim*'s modders, although it did not directly address controversial mods, does suggest 'adult'-themed mods involving nudity, sex, or extreme violence, tend to concentrate on specific websites relatively little-known outside of their users. Nonetheless, such mods do exist, and any game open to unrestricted modding will encounter problems with inappropriate mods. Several of the experts indicated a solution could be found in strictly enforced mod curation, but there is evidence in the survey strict curation will limit the vivacity of the modding community to an extent; relatively few of the surveyed modders reported publishing their mods through the moderated *Steam Workshop*.

By contrast, the challenge of ahistorical mods seems to be smaller than the concerns of the experts would indicate, when *Skyrim*'s equivalent of historical accuracy, lore-friendliness, is considered in the survey. While many less experienced modders in the survey did not pay much attention to keeping their *Skyrim* mods lore-friendly, attention to lore-friendliness rose for more skilled modders who produced more complex works. There are *Skyrim* mods that change the base game with the goal of improving its conformity with the broader *TES* lore. Furthermore, mods are only used when a player chooses to use them, and at least for the more advanced players who took part in the community survey, lore-friendliness in downloaded mods was generally a concern. Still, unless non-historical mods were to be eliminated through curation, there is always going to be potential for players to be confused about the historical content of a VH project when using it in a modified form.

The concerns with modding expressed by experts are real and in no way eliminated by the results of the survey. For some projects, it will not be appropriate to facilitate modding. This will include projects where developers wish to retain total control over the content of the player experience, or simply lack funding to implement modding curation at an adequate level. However, where it is deemed feasible and appropriate to encourage PAS participation, the survey of *Skyrim*'s PAS participants indicates the game's model of player engagement holds great potential.

The experts were not asked about concerns they may have with lore-oriented, encyclopaedist audience engagement. Such engagement occurs entirely independently of the game, and is impossible to limit. In any case, the PAS literature indicated this aspect of PAS participation to be beneficial and uncontroversial. Once again *Skyrim*'s PAS is a powerful example of its potential.

#### 8.4 *Skyrim* as a benchmark for PAS participation in indigenous heritage

Most of the interviewed experts acknowledged the potential benefits of player PAS engagement, though few explicated the specific benefits. The author has previously argued modding engagement can be a powerful factor allowing heritage developers to offset their limited budgets (Granström, 2013) by inviting players into co-creation (Majewski, 2017a), a phenomenon also observed for some commercial developers (Banks, 2013). While this aspect does not present itself directly in the opinions of the experts or in the literature on indigenous CH, many phenomena in modern indigenous media production documented by contributors in Wilson and Stewart (2008), or observable in the development of the film *Ten Canoes* (De Heer, 2006b), are analogous to co-creation because of the community involvement.

For digital media, Christie and Verran (2013) document the way the Yolngu Aboriginal community embraced digital technologies into their cultural practices, using computers to produce and control collective memories in a manner analogous to *Skyrim*'s encyclopaedists. Such liveliness is in some ways a pre-requisite for digital media to achieve full integration into Aboriginal knowledge practices, given these are living and ever-changing (Christie, 2008). Among the experts, Mochocki noted the value of encouraging playful engagement with heritage (Mochocki interview, Q11) for those heritage projects where the purpose is less about conveying exact history, and more about enabling the community to engage with their heritage. The value of community engagement is a given for Leavy's (2014) *Virtual Songlines* projects which initially at least were conceived more as virtual world-based alternative to databases for the preservation of culture at a community level. However, direct involvement of community members in project development is typically impossible due to costs (Leavy interview, Q10). For Leavy, it is a long-term goal to provide communities with tools for greater involvement comparable to modding (Q11), although its purposes are more along the lines of the encyclopaedist-style use of media tools described by Christie and Verran (2013). For heritage, then, there is definite value for encyclopaedist engagement. However, in the context of indigenous cultural practices, the line between encyclopaedists and modding practices will be blurred. The premise of Leavy's (2014) *Virtual Songlines* project is that indigenous culture is best displayed in the context of a virtual world rather than in an encyclopaedia or online wiki, a premise that seems to be borne out by the embedded nature of indigenous knowledge (Christie, 2008). Adding encyclopaedic information into the virtual world becomes a form of modding or co-creation.

Chapter 6 argued *Skyrim* is a good case for PAS participation, because it combines a strong world and narrative with moddability in a way relatively unique among games with strong cultural elements. This combination has produced modding and lore communities substantially larger to those of other culture-heavy games like the *Assassin's Creed* or *The Witcher* series. *Skyrim*'s communities, the survey indicated,

invest significant amounts of time into both encyclopaedist and modding activities, and in both cases, the engagement with the lore, in other words the game's fictional heritage, increases. More advanced modders and encyclopaedists are likely to do more research using a wider range of research and verification strategies. They are more likely to integrate their efforts both vertically and horizontally with the rest of the community, and they will pay more attention to the lore-friendliness of their mods and accuracy of their encyclopaedic content.

While the survey presented in Chapter 6 cannot directly explain how *Skyrim* attracted its community, at least a part of the answer must lie in the game's world-building strategies explicated in the autoethnographic study in Chapter 5. *Skyrim* presents players with a daunting world that refuses to readily supply all the answers, forcing players to explore the world in a multilateral fashion inside the game itself, and to coordinate this effort with other players outside of the game. It is common for players to exchange stories of their experiences, and to 'fill in the blanks' by finding out what content other players had encountered (Peckham, 2016). The game is filled with content, enough so to justify a 1100-page game guide (Hodgson, Stratton, & Cornett, 2013). Content includes an overwhelming amount of non-critical lore contributing to immersion through saturation and overflow in Wolf's terms (2012), yet frustrating player efforts to obtain important information through its minimalist knowledge distribution. Its connections with the broader *TES* world push knowledge of other *TES* products onto the player, while at the same time demanding a return to another *TES* product for information useful in *Skyrim*. The world itself is structured openly, allowing players to undertake a multitude of activities in different avenues. Such a world encourages PAS engagement through both modding and encyclopaedist activities as players try to make sense of the world, and to imaginatively expand it.

While *Skyrim*'s PAS space serves as a benchmark of how players can expand their engagement with a cultural topic conveyed through a game, *Skyrim*'s world-building and world-depicting strategies are the template for how engagement can be fostered. This will not be possible or desirable for all projects. However, for heritage projects that see value in expanding their audience's PAS activities, this can be achieved by employing some of *Skyrim*'s tools and strategies in the base project. Some of these strategies would seem exceedingly counter-intuitive in the context of a heritage project; intentionally *not* giving important cultural information to players so they pursue research outside of the game, or intentionally *not* filling out parts of the world with content to leave space for other contributors. There is potential for failure where such tactics backfire, leading not to greater engagement, but to a weaker heritage product. Heritage developers interested in exploring *Skyrim*'s tactics within their own projects, must remember *Skyrim*'s creators have 20 years of experience in building open-world RPGs (Peckham, 2016). Every *Skyrim* tool or strategy imported into a heritage project must be carefully considered.

Ultimately, even for a series like *Skyrim*, PAS participation remains a concern for a small minority. Prior to the introduction of modding capacity for the console versions of *Skyrim*, only 8% of *Skyrim* players used mods, and less than 1% produced mods (Bethesda Game Studios, 2015). The UESP's registered user base is of comparable size to the modding community, although its readership is probably higher than 8% of *Skyrim*'s players, given a recent survey of Australian video game players indicates 68% accessed some form of online walkthrough, video or wiki (Brand, Todhunter, & Jervis, 2017). However, their relatively small sizes do not disqualify the value of modding or encyclopaedist communities. Any creative cultural activity will be actively pursued by an elite minority of the population; PAS engagement facilitates a dramatic expansion of that minority from a small group of game developers or game guide publishers, to a far larger group of players, whose creative output in turn reaches an even larger group. The credits for *Skyrim* include less than 600 names (Bregger, n.d.), including all the publishing and support staff; this number may increase as much as hundred-fold to 60,000 for the active number of modders, and a similar number of encyclopaedists. If an indigenous CH game were to generate a PAS community of even a fraction of this size, this would already be a very significant expansion of its media footprint. Additionally, if even a fraction of the PAS was constituted by indigenous community members, these members would automatically be empowered by their access to the community's knowledge in real life. All PAS participants pursue more research and wider research strategies as they become more advanced; for indigenous PAS members, this would mean leveraging their insider status to obtain information directly from local sources like family members and community elders. In the context of rejection of traditional culture among youths (Trudgen, 2000), this possibility seems especially desirable.

## 8.5 Conclusion

The present chapter has attempted to synthesise the findings of the three studies constituting this thesis. Before transitioning to the final chapter for an overall conclusion of the project, two issues from the expert interviews need to be briefly highlighted. These are community-developer relations, and technological access.

In the final part of the interview, experts were asked for their views not only about modding, but also about issues of collaboration between indigenous communities and developers, heritage practitioners, or scholars. Issues such as ownership and control have in the past caused tension between heritage practitioners and indigenous communities (Zimmerman, 2005). However, while the interviews indicated many potential challenges, including also internal relations within the community, none of these gave any indication of intractability. Much of the solution already exists in the form of the cultural collaboration protocols developed by Leavy (2014; see also Appendix B). The rest can be found in careful

dialogue; for non-indigenous heritage practitioners, perhaps the best summary are the words the author used to summarise the views of one of the experts: *consultation taken to the extreme, and learn to take “no” for an answer* (Busbridge interview, Q8).

The other challenge discussed with the experts was technological access, or simply the possibilities for a given indigenous community to access the technology needed to enter a virtual world. Acknowledging problems exist, the experts agreed no overarching recommendation can be issued. For each community, the local problems and potential solutions need to be considered.

The problems and characteristics of indigenous heritage have many commonalities even between groups from halfway across the world (Zaman, 2013); but the most important commonality is that everything comes down to the local situation on the ground. An analysis of *Skyrim* and its audience offers many potential tools and tactics for heritage practitioners, but the applicability of virtual worlds must always be carefully assessed.



# Chapter 9: Conclusion

## 9 Conclusion

This thesis set out to combine seeming opposites – the entertainment-oriented imaginary worlds of open-world RPGs, and the serious reality of indigenous cultural heritage. Driven by the problem of cultural loss in indigenous societies, particularly the Australian Aboriginal peoples, the thesis investigated ways of transmitting culture. Its core contention has been that the most natural way of presenting an indigenous culture is in a holistic, all-encompassing manner. In a museum, as argued by Stanner (1979), this would require a panoply of different types of content, incorporating different media, and requiring a remarkable variety of indigenous and non-indigenous experts. The same effect can be achieved through virtual worlds, as Leavy (2014) has been arguing – and doing – for almost two decades. Creating a virtual world is a complex task, and a successful virtual world will convey to its visitor a sense of worldliness, of place, which can best be explained in terms of three types of presence: environmental, social, and cultural (Champion, 2015). There is an overlap between the concepts of virtual worlds and presence, and the concepts of immersion in imaginary worlds (Wolf, 2012); successful video game virtual worlds are commonly integrated into larger imaginary worlds.

One example of a successful imaginary and virtual world is the open-world RPG *The Elder Scrolls V: Skyrim*. The history of *The Elder Scrolls* as a series, and of academic engagement with it was summarised in the extended literature review in Chapter 3. Although now six years old – ancient, in digital terms – *Skyrim* remains one of the benchmarks of open-world RPG design, and a point of reference for heritage scholars (Johnson, 2013; Granström, 2013; Champion, 2014; 2015). This thesis has argued if *Skyrim* is to serve as a benchmark, it must be carefully analysed and dissected, broken up into a palette of tools and strategies to employ piecemeal in the realities of VH, so radically different to the commercial game industry. To achieve this, an immersive autoethnographic study of *Skyrim* was performed.

A second point of investigation concerned active audiences (Jenkins, 2006). *Skyrim's* player community collaborates on mods, wikipediae, and other projects in the context of the PAS, the passionate affinity space (Squire, 2011; Gee, 2013). The PAS gives rise to the phenomenon of co-creation (Banks, 2013), where the work of players helps to expand a game's reach, extend its lifespan, or in the most extreme cases, even directly assists in the completion of its development. Mods have already been extensively explored within heritage (e.g. Francis, 2011; Champion, 2012b; Goins, Egert, Phelps, Reedy, & Kincaid, 2013), but only as tools for academic work; the potential for direct collaboration with modding communities has remained unexplored (Majewski, 2017a). Consequently, this thesis has examined *Skyrim's* PAS, contending player activities in the *Skyrim* community also provide an example of what

modding and lore communities can offer to heritage. To achieve this, a quantitative online survey of *Skyrim*'s modding and lore communities was conducted.

The third point of investigation served to provide a heritage context for the whole project. To this end, data was collected on current and potential indigenous CH strategies, in the form of qualitative in-depth interviews with three groups of experts: traditional non-digital heritage, VH, and game development. In each case, the experts included both scholars and practitioners. Their responses explored contents requirements, cultural management strategies, and audience engagement, all in the unique context of indigenous culture, which demands a careful approach due to epistemological differences (Christie, 2008) and past relational problems (Zimmerman, 2007).

## 9.1 Research questions and findings

The thesis aimed to answer the following questions:

1. How is *Skyrim* constructed to enable players to experience tangible and intangible heritage in its environmental, social, and cultural aspects? (Chapter 5)
2. How and why do *Skyrim* players explore and popularise cultural heritage presented in RPG worlds through participation in online passionate affinity spaces? (Chapter 6)
3. What core game and project design features can be identified to support the dissemination of Indigenous cultural heritage in open-world RPG games, in terms of world-building, and in terms of supporting appropriate cultural management mechanisms and indigenous audience engagement? (Chapter 7)

The resulting findings fall into two categories. Firstly, there are generalizable findings about the cultural contents of the RPG and player engagement with this content. These findings are relevant to media scholars exploring video games, world-building, participatory culture, and game-based learning, as well as academic and government institutions using video games for CH purposes. Secondly, there are the specific findings for the development of RPGs exploring Aboriginal culture, useful for CH practitioners working in this area, and to Aboriginal communities looking for ways to safeguard their heritage. These findings have generalisable aspects, as despite the diversity of indigenous cultures, there also are many commonalities (Wilson & Stewart, 2008).

Chapter 5 responded to RQ1. A set of 22 primary world-building components across the three different presence types (Champion, 2015) were identified and described within *Skyrim*, along with three extra-diegetic world-building components. Subsequently, the question of how primary components come together into broad world-building structures was explored. The tactics used within each of these

components and structures were also examined, along with the broader strategies these tactics together make up. An important finding beyond the elements and tactics identified, was the way these aspects work together as part of a world-building gestalt (Wolf, 2012). The gestalt effect allows *Skyrim* to transition from a set of imperfect components into a unified, immersive and convincing virtual world containing much more than the sum of its parts. Another important finding in the context of funding limitations was the scalability of *Skyrim*'s world, which is devised in a fractal manner, where the overall structure is repeated at a smaller scale in its parts.

RQ2 was examined in Chapter 6. The survey of *Skyrim*'s audience attracted a smaller-than-anticipated group of participants, presumably due to the game's old age and natural decline of its community. Nonetheless, the findings showed how the most engaged participants invest substantial amounts of time, employ progressively more sophisticated methods, and become increasingly concerned with the game world as opposed to the game. Contrary to some past assertions about games and fandom (e.g. Wirman, 2007), made in the context of online games such as *World of Warcraft*, *Skyrim*'s fans are not power gamers interested mainly in gaining advantage.

Chapter 7 examined the expert interviews to respond to RQ3. No one valid strategy exists for indigenous CH in the form of RPG games. Indigenous heritage is realised most fully at a local community level; projects should be grounded in local challenges and requirements. Confirming Stanner's (1979) contentions and modern discussions of indigenous heritage (e.g. Munjeri, 2009; Zaman, 2013), indigenous experts agreed their heritage must be explored in a holistic manner. Rather than identifying specific forms of cultural output as more important than others, they pointed towards overarching values and relation systems.

Finally, Chapter 8 attempted to synthesise the findings to more overtly point to way open-world RPGs can contribute to the transmission of Aboriginal heritage. *Skyrim* was argued to be a powerful example of a virtual world, its world-building offering many tools and tactics to use in indigenous CH projects, and in many non-indigenous CH projects as well. The way *Skyrim* and its preceding *TES* games have been constructed has contributed to the unique attraction of its imaginary world for both encyclopaedists and modders, so projects where player PAS engagement is desired will do well to examine *Skyrim*'s tactics to this effect.

At the end of this research, the development of an open-world RPG for heritage taking advantage of successful commercial practices and exploits PAS mechanisms remains a daunting prospect. The same

intractable issue of funding remains, and in mid-2017, Brett Leavy of the *Virtual Songlines* project posted a frustrated status update on the project's Facebook page<sup>102</sup>:

*"What does it take to raise funds?*

*Virtual Songlines is exploring ways to raise funds from anywhere to get our products to market. [...]*

*We've spoken to many impact investors (people who are interested in getting behind start ups with a purpose beyond just profit) but have been unsuccessful thus far. [...]*

*Over the past 12 months, I've had a few sleepless night [sic] thinking about how to keep paying my developers, responding to the knock backs, learning from them, revising our approach and doing it over again but with confidence."*

*(Leavy, 2017)*

Such funding issues do not go away, as they are a part of a far broader question of how heritage works should be funded, and how much of this funding can be allotted to new and experimental methods like VH. Virtual heritage is not a consideration for Aboriginal Elders addressing concerns of cultural loss (People Culture Environment, 2014). However, Christie and Verran (2013) likewise reported the communities they worked with were initially wary of digital technologies. Leavy reports strong enthusiastic and emotional reactions from Aboriginal audiences to presentations of *Virtual Songlines* (Funnell, 2015; Leavy interview, Q6); the author also saw similar enthusiasm when showing *Virtual Songlines* to Lexene Busbridge (Busbridge interview, Q4). Nonetheless, detailed evidence of the value of virtual worlds in indigenous heritage is needed, particularly given the connection between VH and video games, and the Australian government's unwillingness to engage with the games industry (Keogh, 2017). It may be hoped this research can alleviate some doubts about, and generate interest in VH, justifying more funding from public bodies. Funding difficulties will remain, however, and this makes it even more important for developers to carefully pick and choose developmental strategies. It is hoped projects such as *Virtual Songlines* can benefit from this thesis by identifying specific lessons they can incorporate from *Skyrim* within the constraints of their present budgets. Elsewhere, the teams behind successful commercial indigenous game projects such as *Never Alone* (Roberts, 2015) may find within the present findings the means to expand the scope of their future projects; indeed, the survival game originally offhandedly proposed at a Cook Inlet Tribal Council meeting only to eventually be scaled down

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<sup>102</sup> <https://www.facebook.com/virtualsonglines/>

to the more achievable 2D platformer *Never Alone* (Cook Inlet Tribal Council, 2017) would have likely had much in common with *Skyrim*. This research doesn't make it easier to fund such projects, but it does shed more light on how they may be successfully constructed without costing more.

## 9.2 Research limitations

This research was limited by design to examining just one game, *Skyrim*, and its audience. In the context of attempting a more in-depth qualitative examination of a large-scale open-world RPG, the choice of one game was a natural design choice. However, it does impose clear limitations on the project, as even a game as well-regarded as *Skyrim* is not representative of the entire genre.

*Skyrim* is a transient object. In time, other games will emerge, if they have not done so already, offering more sophisticated virtual worlds. However, *The Elder Scrolls* is a series, and while a full historical overview of the build-up of world-building in the series could not fit in this thesis, the world-building toolbox employed in *Skyrim* has been assembled over the course of 23 years since 1994's release of *The Elder Scrolls: Arena*. *Skyrim* is not merely a well-received game, but also the latest stage of an ongoing development process. In any case, judging from the scholarly response to *Morrowind*, *Oblivion*, and *Skyrim*, it is likely its inevitable sequel will again be a notable virtual world; its world-building changes compared to *Skyrim* will be incremental rather than revolutionary. Consequently, while the choice of *Skyrim* does come at the opportunity cost of not looking at open-world RPGs from other lineages, within the context of the *TES* series, the longevity of the findings presented in this thesis is unlikely to be cut short because of a sequel. Any sequel would warrant a fresh examination, but it would not invalidate earlier findings.

If the choice of *Skyrim* was not a problem for the game study, it did turn out to be more problematic for the audience analysis. The survey was limited in participant numbers, and given its wide deployment, it seems the most likely cause is the simple decline of *Skyrim*'s PAS with age. Whatever the cause, the survey results remain problematic; even though an online convenience sample could never be representative, the small size of the sample makes it difficult to infer anything about *Skyrim*'s PAS participants with any certainty. Other than Poor's (2015) study of *World of Warcraft* guilds no earlier study known to the author had attempted to examine a game PAS longitudinally. The mechanics of aging for game PAS remain unknown. A survey conducted in 2012/2013, before this research even commenced, would likely have attracted a much larger sample. But when does a PAS for a game like *Skyrim* reach its peak? How quick is its decline, and how dependent is it on the release of other games pulling away its participants? These factors remain unknown.

Overall, the characteristics observed in the sample are in general agreement with PAS literature (e.g. Squire, 2011; Gee, 2013). It is probably reasonable to assume the sample's characteristics are accurate in their revelations about the broader population of *Skyrim*'s PAS. Nonetheless, this assumption remains unverifiable.

Beyond the sample size, the author must note various small design problems with the survey questionnaire, like the partial lack of symmetry in questions asked of the lore and modding segments. While these two areas did require some questions to be different, the author found in the modding area, insufficient questions were asked about overall *TES* modding commitments outside of *Skyrim*. Such design issues did not affect the overall objectives of the survey, but they do limit the utility of the survey data outside of this thesis.

A third limitation emerges from the expert study. Twenty-four experts were contacted, of whom 12 ultimately were interviewed. Of the experts who failed to respond or declined the interview, seven were researchers with experience in major museums, five in Australia, and one each in Papua New Guinea and the USA. Ultimately, there remained a gap among respondents working in public heritage institutions, notably institutions concentrating on traditional heritage methods rather than VH. This low response rate may indicate experts in this field do not currently value VH methods, either because of the prohibitive costs or because they are not seen as benefitting existing processes. The value of the tangible artefact, while questioned in more recent heritage research (e.g. Smith, 2006), remains a core consideration for many heritage institutions such as museums<sup>103</sup>. However, it is equally possible developing stronger contacts in the area beforehand would have yielded better results. Also, the game developer experts proved to be especially interesting, differentiated, and unorthodox respondents. Consequently, incorporating additional game designers into the study, particularly ones involved with other RPG game development companies and even with non-digital RPGs, could yield additional insights. Finally, the present study was conducted not by a scholar of Aboriginal studies, but of media studies. Although this gap in expertise was partially filled through the expert interviews, undoubtedly, the specific qualities of Aboriginal culture would have many additional implications and subtler nuances for CH. The trade-off, however, would be a reduction of focus on other areas.

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<sup>103</sup> Recently, the author had an informal conversation about the potential for virtual exhibitions at a Polish museum specialising in Australasian cultures. The museum's director openly stated that they saw the museum's mission as showing tangible cultural items to the public.

The limitations of the present study suggest areas where future research would be warranted. The study of *Skyrim* and its audience was just one of many avenues to be explored at the intersection of video games and heritage.

### 9.3 Avenues for future research

This study has focussed on one series of games, and primarily on just one game within that series; this was a necessary limitation, but there are other virtual worlds outside *TES* are also worth investigating from a heritage perspective. One example would be the recently-released Czech historical RPG, *Kingdom Come: Deliverance* (2018). Another is the Polish RPG *The Witcher 3: The Wild Hunt* (2015). The game's designers have aimed to out-do *Skyrim* in some aspects of world-building (Hanson, 2013), and the game has playfully incorporated elements of Polish heritage (Weidman, 2016).

*The Witcher* series differs from *TES* by imposing a character on the player, with the role-playing mechanics implicitly shifting from the process of creating a role through the build-up of the player's avatar, to the process of playing a pre-determined role through the control of a pre-determined avatar. This approach need not be a limitation; proponents of role-playing in education frequently point out the value of players being forced to think through someone's motivations by being cast in that particular role (van Ments, 1989; Gee, 2006; Mochocki, 2013). Games like *The Witcher III* could potentially provide more focussed CH experiences exploring narrower aspects of culture or history with higher granularity. This, as research has consistently shown, is also the case for non-RPG games that provide the player with a sufficiently rich and open world to explore, as for example in the *Assassin's Creed* series (e.g. Whitaker & Glass, History Respawned: Assassin's Creed IV, 2013; Whitaker & Luther, History Respawned: Freedom Cry and Liberation, 2014; Whitaker & Andress, History Respawned: Assassin's Creed Unity, 2015), and similar games like *Far Cry: Primal* (2016). Such games are an important point of reference for VH practitioners (Devine interview, Q3B), and undoubtedly will remain so as new, more technologically and hopefully more culturally developed titles are released. Especially intriguing is the forthcoming introduction of a special combat-free educational mode for *Assassin's Creed Origins* (McAloon, 2017). This educational mode will warrant scholarly examination. Beyond heritage, there would also be value in comparing the world-building mechanisms of these different games, and to analyse the unique properties imaginary worlds take on when turned into virtual worlds.

There are undoubtedly many other single-player games to offer insight into conveying CH via games. For example, one unexpected candidate, the *Cooking Academy* (2008-2014) series, emerged from the observations on cooking made in *Skyrim* (JS 4); the processes of cooking are an interesting heritage element, but games like *Skyrim* simplify them to the extreme. Even though even this simplified approach



has been enough to inspire people to attempt preparing a *Skyrim* cookbook for real cooking (Valentine, 2017), casual cooking games like *Cooking Academy* provide examples of more interesting and complex ways of conveying cooking processes through mini-games. The unique mechanics of indigenous-themed serious games described by LaPensée (LaPensée interview, Q3C, Q7-8) would be even more natural sources of inspiration.

*Skyrim* is also not exhausted as a research site. Rolston's proposals to use the game as the platform for practical research through modding are notable. In this context, a review would be advisable of the existing body of mods and official Creation Club content, which revise or extend *Skyrim*'s functionality, for example through the implementation of environmental survival mechanics.

Turning to the PAS community, *Mount & Blade: Warband* frequently emerged in this research as an interesting case. *Warband* has generated many number of culture-oriented mods, despite the extreme poverty of modding tools and the combat-centric mechanics. Its forthcoming sequel, *Mount & Blade II: Bannerlord*, is likely to facilitate more complex modding. The PAS around *Bannerlord* will likely thrive, and there will be mods building historical settings on *Bannerlord*. What is unknown is the degree to which their creators will be able to go beyond providing an enjoyable gameplay experience, towards a worthwhile heritage experience. As the author has argued in relation *Bannerlord*'s predecessor (Majewski, 2017a), this area warrants interest from heritage scholars and practitioners.

Multiplayer scenarios also afford interesting possibilities for heritage. The virtual worlds and communities of multiplayer games, particularly MMORPGs, have been the subject of much research (e.g. Castronova, 2005; Pearce & Artemesia, 2009; Lehdonvirta & Castronova, 2014; Brown, 2015; Pelkonen, 2016). These games were intentionally sidelined here. Communal participation and co-creation functions differently in MMORPGs than in single-player games; modding must be restricted to ensure it is not used to gain unfair advantage in a multiplayer environment. While some limited user interface modding is possible, the survey of *Skyrim*'s modding community did not reveal a substantial overlap between this community and *TES Online* modders. Nonetheless, MMORPGs such as *World of Warcraft* or *TES Online* exemplify community-based encyclopaedic efforts (Squire, 2011). Furthermore, as games like *Skyrim* are now open to curated console-based modding distribution, future MMORPGs could also find ways to introduce curated possibilities of modding for its players, or even to introduce the Creation Club functionality.

The heritage expert interviews highlighted two possibilities afforded by multiplayer games. The first is co-creation, where players actively contribute to the online world (Flynn interview, Q4). Two focal points in this area are the games *Minecraft* (2011) and *Second Life* (2003). There are already heritage-

based projects for both, with *Minecraft* having a well-established track record in educational usage (Brand, de Byl, Knight, & Hooper, 2014), and being employed to make digital artefacts and sites more accessible to the public (McGraw, Reid, & Sanders, 2017), while *Second Life* has become a site for co-created role-playing experiences such as *The 1920s Berlin Project* and many other social-cultural experiences (e.g. Frömming, 2013)<sup>104</sup>. Indigenous Australian heritage had an unexpected brush with *Second Life*, when telecommunications giant Telstra incorporated a virtual representation of the natural landmark and Aboriginal sacred site Uluru into their *Second Life* island (Haines, 2007). The case raised controversies due to a lack of Aboriginal involvement and consultation in the process (Haines, 2007; Wyeld, Crogan, & Leavy, 2007; Ginsburg, 2011), but better-conducted projects could follow.

A second, related, innovation is that of curated VH sites, where volunteers or museum employees spend time playing historical characters and interacting with other players in an online VH world. This concept would effectively provide VH sites with the sort of living history interpreters whose presence at non-virtual heritage reconstructions today is commonplace. Today, a visitor to colonial Williamsburg in the USA will encounter staff members role-playing the inhabitants of the site; living history interpreters can also be hired for online lessons conducted via Skype (Mochocki interview, Q14), and there have been attempts at interpretation-by-email (Magelssen, 2008). It is easy to see how heritage interpretation may shift into online virtual worlds in the future. What if the Singapore schoolchildren for whom *The World of Temasek* was developed, were not left to their own devices and the vagrancies of AI characters, but could encounter fully-trained interpreters guiding them through the world as NPCs? Could offline tours such as those conducted by Busbridge at the Jellurgal Centre (Busbridge interview) be offered to remote clients through virtual worlds? *Second Life*-based worlds such as *The 1920s Berlin Project* already provide a critical first step, establishing virtual sites populated by hobbyist virtual re-enactors. As in the case of non-virtual heritage (Magelssen, 2008), a visitor-oriented, pro-education form of re-enactment could follow. Conversely, virtual re-enactors could also be present at real sites through mobile-based augmented reality (Flynn interview, Q4). Virtual objects could also spill over into real or replica heritage sites through 3D printing or holographic projections<sup>105</sup>, further problematising the heritage debate around authenticity and pastness (Holtorf, 2013).

Champion (2006) has argued one potential value of virtual heritage is in *not being there*: taking the strain off real sites such as Machu Picchu, which are often exceedingly vulnerable to the wear damage

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<sup>104</sup> Rather than point to the numerous other scholarly works, the author would encourage the reader to consult the Wikipedia's entry on *Second Life*, which overviews the many ways this virtual world has been used for role-playing, art, education, religion, science, public relations, and even public diplomacy: [https://en.wikipedia.org/wiki/Second\\_Life](https://en.wikipedia.org/wiki/Second_Life)

<sup>105</sup> E.g. <http://www.euclideon.com/>

resulting from numerous tourist visits. But a virtual Machu Picchu must be sufficiently attractive for potential tourists will choose it over the real thing. One way to further this goal is experimenting with virtual reality and improved immersion and embodiment as exemplified by Flynn's *Neolithic Maltese Temple* project (Flynn, 2012). Another may be to provide a virtual connection to role-playing curators and interpreters who provide visitors with the immersion in historical culture and society not achievable at the real site. Notably, live interpreters, once trained, could work remotely from any place with a reliable internet connection; there could even be multiple interpreters playing the same role (Magelssen, 2008). Virtual Machu Picchu would not be limited to a small body of curators working at the real Machu Picchu; appropriate curators could even come from the other end of the world.

Finally, Bethesda Softworks' other RPG world, the futuristic *Fallout* series, warrants mention. These games are significant partially because they also represent efforts to further progress the art of virtual world-building. *Fallout 4* (2015), released four years after *Skyrim*, can be presumed to build on *Skyrim*'s techniques. Does the game's post-apocalyptic futuristic setting render the game less valuable for heritage or for broader digital humanities research? To some degree yes, as cultural heritage is structured around the past. However, culture does also look to the future. One of the longstanding debates in heritage studies is whether heritage has any intrinsic value, or whether its value stems from its utility to present-day society, and by extension, its ability to shape the culture of the future (Holtorf, 2011). The forward-looking aspect of heritage must be acknowledged. From this perspective, there would be value in looking at futuristic games and other media to see how the culture of today depicts the culture of tomorrow. For indigenous cultures, futuristic environments could also provide an opportunity to make powerful statements by showing their culture not only as it exists in the present, but as it can potentially survive and thrive into the future. LaPensée noted this in an environmental context:

*"Because we're talking a lot about cultural heritage as in the past, or in the present, but I also want to be thinking about the future. And being mindful of the impact that oil spills are having on water right now, and reflecting through a game what we as Anishinaabeg discuss, which is that there will come a time when the weather changes will be so erratic and, there will be so many great changes that we really do need to gather together and return to the teachings in order to... survive."* (LaPensée interview, Q6)

*Fallout* could also provide opportunities to explore the nature of cultural heritage by examining heritage loss. It is a common trope in fiction of any medium to examine the value of an object or concept by examining the consequences of its removal. The value of CH in its different forms could perhaps be

better appreciated in its absence. Could the heritage value of particular buildings in Boston be explored by examining the reactions of Bostonian players to *Fallout 4*'s virtually-destroyed Boston? Dwelling on this point, the author is reminded that in Poland, the scenario of a ruined post-apocalyptic city, far from being futuristic, lies within the near past, accessible through the memories of the oldest living generation. This living memory of the systematic, total destruction of Warsaw by German forces during the Second World War, of the stark contrast between the lively city of 1939 and the utter ruins of 1945, is a memory that, to most people today, is not so much unreachable as it is impossible to comprehend without direct experience<sup>106</sup>. From this perspective, post-apocalyptic games like *Fallout 4* might perhaps bridge that gap, providing the current generation with the virtual experience of losing their world, and in consequence of giving them some degree of empathy towards people who have lived through, or are living through, the reality of cultural loss.

## 9.4 Coda

Can virtual worlds offer anything to cultural heritage? For Flynn, this is an unnecessary question (Flynn interview, Q6). We do know RPGs are immersive. We know they work. And we know how engaged their audiences are. There is agreement games like *Skyrim* provide inspiration for serious VH projects. The value of dissecting the world-building in *Skyrim*, and surveying its audience, and the value of this thesis overall, is to translate the broad recommendation to 'make it like *Skyrim*' into concrete and specific advice by breaking the game down into its components, and by analysing its world-building techniques and tools on an individual basis. There is an enormous gap between the budget the developers of *Skyrim* had at their disposal and the typical budget of a heritage project (Granström, 2013). This is a disproportion made even larger by the disparity of experience; as *Skyrim* producer Todd Howard points out, many of his co-developers had been working on open-world RPGs together as a team for 15-20 years (Peckham, 2016). Under such circumstances, the only way heritage practitioners can draw anything at all from *Skyrim* or other RPGs, is to carefully pick and choose those tools and techniques from *Skyrim*'s palette best suited for their own project needs and constraints.

The second need addressed by this project was to examine *Skyrim*'s audience, to investigate whether and how heritage practitioners can collaborate with modders and encyclopaedists to enhance their projects. Recommendations for new and enhanced approaches to VH are useful for many kinds of VH,

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<sup>106</sup> Ironically, the difficulty in comprehending this destruction stems partially from the resounding success of the communist-era reconstruction of Warsaw, which has largely obscured the destruction. The historic medieval core of the capital of Poland is the only heritage site in the world with the dubious honour of being listed as UNESCO World Heritage not for its own intrinsic value, but in appreciation of the scope and outcomes of the reconstruction effort (UNESCO World Heritage Centre, 2014). Effectively, Warsaw's historic centre is protected as the world's largest historical reconstruction site.

but especially indigenous cultural heritage, an area is vulnerable and suffering from cultural loss due to disengagement (Trudgen, 2000). Even those who are culturally engaged and involved in transmission of culture realise the extent to which they need to learn their own culture anew:

*“I hope to think that maybe when I’m old, my children will know more about their culture than I’ve known.”* (Busbridge interview, Q5)

Access to culture can be enhanced by finding optimal forms of gathering and depicting cultural knowledge. Back in 1965, when anthropologist W.E.H. Stanner (1979) speculated about the bedazzling range of tangible and intangible cultural elements needed to properly show Aboriginal culture in its full context, and the diverse range of skills and tools needed to realise this vision, games did not exist. At the time, neither he, nor anyone else, could have realised this holistic indigenous cultural framework would be achievable in the form of a single media product. However, open-world RPGs like *Skyrim* appear to be a viable strategy for this purpose. While still limited in many ways, RPGs immerse players into a unified environmental, cultural and social world, with specific design tools and stratagems applied to ensure each part of this triad serves to inform the other two. Culture can thus be exhibited in context. The virtual world of the RPG has the potential to become an effective holistic framework for the depiction of indigenous culture.

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*Civilization* (series), MicroProse / Activision / Firaxis Games, 1991-2016.

*Cooking Academy* (series), Fuzago, Inc., 2008-2014.

*Doom* (series), id Software, 1993-2017.

*Dungeon Master*, FTL Games, 1987.

*Dungeons & Dragons* (tabletop), Gary Gygax & Steve Arneson / Tactical Studies Rules, 1974.

*Dzikie Pola* (tabletop), Jacek L. Komuda, Maciej Jurewicz, Marcin Baryłka / Wydawnictwo MAG, 1997.

*The Elder Scrolls* (franchise), Bethesda Softworks, Vir2L Studios, and Zenimax Online Studios, 1994-2017.

*The Elder Scrolls Adventures: Redguard*, Bethesda Softworks, 1998.

*The Elder Scrolls: Arena*, Bethesda Softworks, 1994.

*The Elder Scrolls II: Daggerfall*, Bethesda Softworks, 1996.

*The Elder Scrolls III: Morrowind*, Bethesda Softworks, 2002.

*The Elder Scrolls IV: Oblivion*, Bethesda Softworks, 2006.

*The Elder Scrolls V: Skyrim*, Bethesda Softworks, 2011.

*An Elder Scrolls Legend: Battlespire*, Bethesda Softworks, 1997.

*The Elder Scrolls Online: Tamriel Unlimited*, Zenimax Online Studios, 2014.

*The Elder Scrolls Travels: Dawnstar*, Vir2L Studios, 2004.

*The Elder Scrolls Travels: Oblivion*, Vir2L Studios, 2006.

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<sup>107</sup> Player-produced game mods are only listed if published; work-in-progress mods are unstable entities liable to name changes and sudden disappearances.

*The Elder Scrolls Travels: Shadowkey*, Vir2L Studios, 2004.

*The Elder Scrolls Travels: Stormhold*, Vir2L Studios, 2003.

*Enderal: The Shards of Order (The Elder Scrolls V: Skyrim mod)*, SureAI, 2016.

*The Gift of Food*, Elizabeth LaPensée, 2014.

*Fallout* (franchise), Interplay Entertainment and Bethesda Softworks, 1997-2015.

*Fallout 3*, Bethesda Softworks, 2008.

*Fallout 4*, Bethesda Softworks, 2015.

*Far Cry: Primal*, Ubisoft, 2016.

*Firewatch*, Campo Santo, 2016.

*Grand Theft Auto* (series), DMA Design/Rockstar North, 1997-2013.

*Grand Theft Auto V*, Rockstar North, 2013.

*Grand Theft Auto: San Andreas*, Rockstar North, 2004.

*Gothic* (series), Piranha Bytes, 2001-2006.

*Hysteria (The Elder Scrolls V: Skyrim mod)*, Rochester Institute of Technology, 2012.

*King of Dragon Pass*, A Sharp, LLC, 1999.

*Kingdom Come: Deliverance*, Warhorse Studios, 2018.

*Legends of Valour*, Synthetic Dimensions, 1992.

*MASELTOV* (mobile app), MASELTOV consortium, 2015.

*Mass Effect*, BioWare, 2007.

*Mount & Blade* (series), TaleWorlds Entertainment, 2008-2011.

*Mount & Blade: Warband*, TaleWorlds Entertainment, 2010.

*Mount & Blade: Warband – Viking Conquest*, Brytenwalda Team, 2014.

*Mount & Blade: With Fire and Sword*, Studio Sich, 2011.

*Mount & Blade II: Bannerlord*, TaleWorlds Entertainment, forthcoming.

*Nehrim: At Fate's Edge (The Elder Scrolls IV: Oblivion mod)*, SureAI, 2010.

*Never Alone*, E-Line Media, 2014.



*Neverwinter Nights*, BioWare, 2002.

*Ngurrara* (story app), Weerianna Street Media Pty Ltd, 2013.

*Norse (The Elder Scrolls IV: Oblivion mod)*, Jesper Flarup / David Partorp, 2009.

*Norse Gleipnir (The Elder Scrolls IV: Oblivion mod)*, Jesper Flarup, 2011.

*Ohana*, University of Hawaii Academy of Creative Media, 2006.

*Red Dead Redemption*, RockStar San Diego, 2010.

*Revolution (Neverwinter Nights mod)*, MIT Education Arcade, 2004.

*Resistance: Fall of Man*, Insomniac Games, 2006.

*RezWorld*, Thornton Media, Inc., unpublished.

*Roma Nova*, Serious Games Institute UK, 2010.

*Rome Reborn*, Frischer Consulting with Virtual World Heritage Laboratory (University of Virginia), UCLA Experiential Technology Center, Reverse Engineering Lab (Politecnico di Milano), Ausonius Institute of the CNRS, University of Bordeaux-3, and University of Caen, 2007-2008.

*RuneQuest* (tabletop), Steve Perrin / Chaosium, 1978.

*Second Life*, Linden Lab, 2003.

*Sid Meier's Pirates!*, Microprose, 1987.

*Sid Meier's Pirates!*, Firaxis Games, 2004.

*Songlines*, Samantha Vick, 2012.

*Survival Island 3: Australia*, GF Studio, 2015.

*Suvarnabhumi Mahayuth (Mount & Blade: Warband mod)*, Rasiya Team, 2012.

*Tactical Iraqi*, Information Sciences Institute (University of Southern California) / Tactical Language Training, LLC., 2003-2006.

*Total War* (series), Creative Assembly, 2000-2017.

*Tropical Skyrim (The Elder Scrolls V: Skyrim mod)*, Soolie, 2013.

*Turkey Maiden Educational Computer Game (Neverwinter Nights mod)*, Natalie Underberg, 2008.

*Two Worlds* (series), Reality Pump, 2007-2010.

*Ultima* (series), Origin Systems and Electronic Arts, 1981-2013.

*Ultima IV: Quest of the Avatar*, Origin Systems, 1985.

*Ultima VI: The False Prophet*, Origin Systems, 1990.

*Ultima Online*, Origin Systems, Inc., 1997.

*Ultima Underworld: The Stygian Abyss*, Blue Sky Productions, 1992.

*Ultima Worlds of Adventure 2: Martian Dreams*, Origin Systems, 1991.

*Virtual Kamay*, Virtual Songlines, in development.

*Virtual Meanjin*, Virtual Songlines, in development.

*Virtual Warrane*, Cyberdreaming, 2007.

*Virtual Warrane II: Sacred Tracks of the Gadigal*, Immersive Heritage, 2012.

*Warlu Song* (story app), Juluwarlu Group Aboriginal Corporation, 2013.

*We Are Chicago*, Culture Shock Games, 2017.

*The Witcher* (video game franchise), CD Projekt RED, Breakpoint and one2tribe, 2007-2016.

*The Witcher 3: The Wild Hunt*, CD Projekt RED, 2015.

*World of Temasek*, Magma Studios, 2011.

*World of Warcraft*, Blizzard Entertainment, 2004.

*Worlds of Ultima: The Savage Empire*, Origin Systems, 1990.